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THE GERMAN UNIVERSITIES

FOR THE

LAST FIFTY YEARS.

PUBLISHED BY

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THE

GERMAN UNIVERSITIES

FOR THE

LAST FIFTY YEARS.

BY

DR. J. CONRAD,

PROFESSOR OF POLITICAL SCIENCE AT HALLE.

AUTHORIZED TRANSLATION, WITH MAP, NOTES, AND APPENDIX, BY

JOHN HUTCHISON, M.A.,

ONE OF THE MASTERS IN THE HIGH SCHOOL OF GLASGOW,

AND A PREFACE BY

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NOTE BY THE TRANSLATOR.

THE present work forms the second part of the third volume of a series of statistical inquiries in various departments of the national economy of Germany conducted by Dr. Conrad, Professor of Political Science at Halle. In the discussion of many academical questions among ourselves, references to the German universities are of frequent occurrence. Such references, the translator has observed, are not unfrequently based upon incorrect information; and it appeared to him that an English version of such a reliable body of facts and statistics as Professor Conrad has here collected might be of service in this country. The book deals with a subject in which considerable interest is taken at the present time: it is a subject, moreover, on which from a variety of causes it would be next to impossible to obtain a corresponding set of facts for our country.

The subject in the original is treated with all that thoroughness for which German research is proverbial. In presenting the work to English readers, the translator has abbreviated some of Professor Conrad's tables, and

others he has omitted altogether. He has aimed at presenting what he thought would be of more especial value to the various classes of English readers likely to be interested in different parts of the work. While he hopes that the work may thus have been rendered more acceptable, he is fully conscious of the scant justice he has done to the merits of Professor Conrad as a painstaking and accurate statistician.

The pride which the Germans take in their universities is well known. Professor Conrad remarks that the gymnasia have been so often and so deservedly praised that they need no commendation from him. Much more may this be said of the German universities. A very fine estimate of the many-sided importance to Germany of these great institutions will be found in an address delivered eighteen years ago by the venerable Dr. Döllinger, Professor of Ecclesiastical History in the University of Munich, in his capacity as rector for the year. That address was translated into English at the time of its delivery by the late Mr. Appleton, Fellow of St. John's College, Oxford; and it may be read with profit as complementary to the view of the German universities presented in this volume.

The translator is not aware of any English book which contains a criticism of the German higher-school system such as is contained in Professor Conrad's three concluding chapters. He hopes that this will be found not devoid of utility—in some respects, perhaps, in the way of warning

—at a time when in this country we are feeling after some satisfactory settlement of the question of higher education.

The appendix contains, among other matter elucidatory of the text, some considerations showing the absence among ourselves of a number of powerful levers which in Germany are utilized in working the higher-school and university system. For this appendix, and for the notes throughout the book marked with brackets [ ], the translator is responsible.

The translator desires in conclusion to take this opportunity of expressing his obligations to his colleague, Dr. Clemens Schlomka, for valuable aid regarding many technical points, and for many directions as to books connected with the subject.

THE HIGH SCHOOL, GLASGOW,
January, 1885.

PREFACE.

THIS treatise of Dr. Conrad's, regarding which my friend the translator has asked me to say a few words, is so tersely and clearly written that it needs neither summary nor explanation. The only thing which, as it seems to me, can be usefully done in a preface to the English edition is to call attention to some of those points in which its figures, and the inferences drawn by the author from them, suggest reflections of general significance, and throw light on the problems which occupy university reformers in England and Scotland.

It would be superfluous to dwell on the value for other countries of the example and experience of Germany. There is no people which has given so much thought and pains to the development of its university system as the Germans have done—none which has profited so much by the services universities render—none where they play so large a part in the national life. Forty years ago an influential ecclesiastical party in England used to hold them up to reprobation as the parents of revolution, rationalism, and pedantry. Of

late years the current has run so strongly the other way that we are perhaps in danger of seeking too closely to imitate them, forgetting the unlikeness of the conditions under which they exist from those of our own country, and ignoring in particular the great difference caused by their dependence on the State, and their intimate relations to a civil service more numerous and more highly organized than our own. A careful reader of this book will be in little danger of such an error, for it is singularly fair and judicial in tone, showing the merits of the German system but not extenuating its defects, and placing before the English inquirer facts complete enough to enable him to judge for himself. Nothing inspires more confidence in Dr. Conrad than his sense of the limitations which surround the statistical method. Everyone who has tested tables of figures knows not only what tricks they may be made to play with the real facts of a case, but also how apt they are, even in the hands of a perfectly honest compiler, to indicate false conclusions, or to convey the appearance of certainty where no certainty exists. Our author avoids this fault. His inferences are cautious: he repeatedly warns his readers that the figures do not fully cover the phenomena, or do not supply a complete answer to the questions he seeks to solve. But after making these deductions, the tables he gives will be found so instructive and so suggestive

as to make one more than ever sensible of the need for similar information regarding British Universities. Some of the points as to which opinion is now most divided here would cease to puzzle us if we had such data as this book furnishes for the universities of Germany. The materials are certainly less abundant, for our Universities do not keep such full and careful records as those of Germany, and particularly of Prussia, appear to do, but there exists a good deal which has never been turned to account in this way; and even out of the university calendars for the last fifty years and the Reports of Royal and Parliamentary Commissions, tables might be formed which would show, as Dr. Conrad's do for Germany, the fluctuations in attendance, the comparative eagerness for various studies, the relation of university teaching to the professions, the character of the schools which feed the universities. The attempt to scrutinize and summarize such materials would stimulate the Universities themselves to make their records more complete and more exact than they now are.*

* If the collecting and tabulating of such desirable information for the Universities of Scotland is thought to be beyond the sphere of the Education Department, it might well be made one of the functions of some such body as the "General Universities Court"—if the suggestion made by the last Scottish Universities Commission for the creation of such a body were carried out. Such a body might also perform useful functions in watching generally the development of the Universities, and especially in reviewing from time to time the relations between them and the schools of the country, this being a point which in Scotland calls for serious attention.

What are the problems which now chiefly engage the attention of university reformers among ourselves? I will attempt to enumerate them for England and for Scotland separately.

In England they are the following:—

(1) How to make the universities more accessible and attractive to the whole nation, instead of only to the upper and a section of the upper middle class.

(2) How to provide professional and technical instruction as well as that general liberal education which Oxford and Cambridge have chiefly cultivated.

(3) How to provide courses of instruction in and appropriate degrees for new subjects of study, or, in other words, how adequately to recognize the natural sciences and other so-called modern subjects without fatally discouraging the study of the ancient classics.

(4) How to draw in occasional students pursuing some special subject without losing the advantages of prescribed curricula.

(5) How to promote inquiry and research without opening a door to idleness or jobbery.

(6) How to use endowments.

In Scotland the third, fourth, and fifth of the above problems are not less pressing, the third perhaps even more pressing, than in England, and to them we must add—

(4) How to provide additional teachers for the leading branches of instruction without breaking up the professorial system and increasing the expense of a university course.

(5) How to secure a good average of attainments in students entering the universities, and thereby establish a healthful relation between them and the schools.

The experience of Germany bears upon all these points, except, perhaps, the last of those in the English list. I must be content with adverting to three or four of them only.

As respects England, the contrast between the number of students attending the German universities and the total of students at the universities of Oxford, Cambridge, and Durham, and the new university at Manchester (London University, not being a teaching body, does not come into the reckoning) is very striking. Germany with a population of $45\frac{1}{4}$ millions had in 1882-3 24,187 students. England with her population of 26 millions had less than 5,500. Nothing could more clearly indicate the failure of the English system to reach and serve all classes, yet in England the afflux of students has largely increased. Thirty years ago Oxford and Cambridge had only half their present numbers, and the Owens College at Manchester, out of which the new university has

grown, was scarcely established. A similar increase is shown by Dr. Conrad to have taken place in Germany, where the attendance at universities increases far faster than the population; and this holds true of Austria also, which stands in general behind Germany. Our recent increase in England is more rapid, but it still leaves us behind both Germany and Austria.

From what classes of the German population does the increase come? The statistics that exist in German universities as to the occupation of the parents of the students are meagre; but they point to a growing disposition on the part of mercantile men, and what may be called the lower professional class, to give their sons a university education. It is clear that this class resorts to the universities much more than in England, where five-sixths of the students in Oxford and Cambridge are the sons either of comparatively rich men (*i.e.*, people with incomes exceeding £1,000 a year) or of the clergy. In both countries the percentage of students from the peasantry and the artizans is small, but so far as one can judge in the absence of figures for England, much smaller there than in Germany, although the endowments intended to aid students are far larger. Here is matter for reflection.

Three reasons may be assigned for this failure of Oxford and Cambridge to attract men from mercantile families, as

well as from the poorer classes. One is the prejudice created among Protestant Nonconformists by the system of ecclesiastical tests which lasted down till 1871. Although the universities are now perfectly free, the old sentiment of suspicion has not vanished. This, however, is a transitory cause. More serious is the difficulty of expense. Dr. Conrad's tables show that the total cost of the Universities, of which the State pays 72 per cent., and the students by their fees only 9·3 per cent., is much smaller than the total revenues of the English universities and colleges, although the number both of professors and students is very much larger, and although 42 per cent. of the total expenditure is upon establishments, *e.g.*, hospitals, museums, and so forth. Everything is of course more costly in England than in Germany. But the difference between £36,430, the total sum paid in fees by 24,187 German students in the year 1882-3, and the amount paid in fees by English students, which everyone knows to be at least three or four times that amount, though the exact figures cannot be given, is too great to be explained in this way. Add the fact that the German student lives in lodgings, often in a very thrifty way, while the comparatively luxurious life of the English student in the colleges sets a standard even to the non-collegiate student who lives in lodgings, and raises his expenses, and one sees that the difference in style of living is an

richly endowed, but have suffered their endowments to be chiefly absorbed by the rich, and have been out of the reach of the humble classes. The Scottish universities have nobly served the whole nation, but, in thinking chiefly of the mass of their students, have omitted to provide for the needs of exceptional groups, have adhered too long to a cast-iron system of classes and degrees, have done too little (though perhaps as much as their wealthy English sisters) for the prosecution of unremunerative researches in the bypaths of philology, history, and physical science. Their endowments have been small, and the State has dealt with them in a hard and parsimonious spirit. Here the example of Germany may well be quoted. The State expends on the German universities nearly eight times as much as they receive from students' fees, and deems the money well spent. She is liberal in the provision of apparatus. She encourages, by payment, the semi-professorial class of Privat-docenten. She maintains chairs in subjects for which few students can be expected. She recognizes, by allowing some leisure for, and by the distribution of promotion, the function of the professor in advancing the frontiers of science by independent inquiry, inquiry which, though it tends indirectly to improve his teaching, often runs into fields where few students can follow. One of the most interesting of Dr. Conrad's tables shows how the growth of the professoriate has kept pace

with that of the students. In 1880 there were 1,809 teachers at work in the German universities, more than half of whom (967) were full professors (*ordinarii*), the proportion of teachers to students being 1 to 11. This is a higher proportion than that of Oxford and Cambridge, although in them a host of college lecturers exists over and above, and is indeed more important than, the university staff; it is of course very much higher than that of the Scotch universities, where there are only some 105 professors to between 5,000 and 6,000 students, a proportion of 1 to between 50 and 60 students; or, including assistants, lecturers, and all in any way engaged in the work of teaching in the universities, 1 university teacher to more than 30 students. The increase in Germany has taken place partly by adding on fresh teachers for the old subjects, such as Latin and Greek, but still more by founding new chairs for new subjects, such as Oriental and Romance languages, geography, archæology, and by subdividing departments which have been recently developed, such as those connected with political economy, political science, physiology, and biology. This comes out most fully when the case of particular universities is regarded, and the new chairs classified. The philosophical faculty at Leipzig has risen from a staff of 37 in 1837, to a staff of 97 in 1882. In that faculty alone she had in 1882 close on 1,300 students; while Edinburgh, whose medical school is

beyond doubt the most highly developed piece of teaching organization in any British university, reckons some 2,500 students in all the faculties, and has for all the faculties taken together a total teaching staff of about 90 members, or smaller than Leipzig has for the philosophical faculty alone. No wonder that the burden of the report of the last Universities Commission was for more teaching power in all the faculties and for the institution of new professorships in such subjects as history, English language and literature, and so forth, and for lectureships in the modern languages. The figures given significantly rebuke the stiffness of the British Treasury in refusing adequate grants to the universities of Scotland, for in Germany it is mainly by the State that the additional professors are supported. It is, however, also true that few or no German professors have incomes equal to those which their overgrown classes and practical monopoly have secured for some of the more favoured Scottish chairs, and which are, perhaps, taken along with a six months' vacation, more than sufficient to attract the best candidates.

The arrangements made for the Privat-docenten in Germany suggest that much may be done to meet the needs of the Scottish universities by developing the system of what is called extra-mural teaching. It might with advantage be increased, regulated, and made intra-mural, that is to say, a

more definite legal recognition might be given to young men admitted to teach, a better status be conferred upon them, and permission be given them to use the university class-rooms. The present plan of assistants to the professors is obviously a mere makeshift.

This abundance of teachers in Germany has two great advantages. It enables private and individual help and direction to be given to the more promising students in many departments. Such direction is supposed among ourselves to be chiefly needed in the experimental sciences; but the Germans provide for it also in such subjects as philology, law, economics. The value of the training thus given, the mastery of sound method thus acquired, can hardly be over-estimated: it is something more precious for those who are themselves to become workers, than the information conveyed by the public lecture. And, further, it secures that prosecution of inquiry and research which in Scotland is not provided for at all, and in England is being somewhat awkwardly attempted by the plan of bestowing fellowships on the condition of doing advanced work. The German professor need not give his whole time to teaching, yet the obligation to teach keeps him in relation with reality, through the mind of his auditors. He has not to cover the whole of a vast subject like the Scottish professor, and may therefore choose and cultivate some special department. He

is one of a large band of teachers and inquirers living near one another, and stimulated by one another. The great number of chairs open as prizes rouses the ambition and sustains the industry of the younger men, who can look for promotion over a far wider field than either England or Scotland as yet offers.

Unlike as the United States are to Germany in their educational as well as in their political and social character and conditions, there is a point in which they resemble one another. In no other country do universities hold so high a place or discharge such important functions. The universities of America are the institutions most capable of confronting and overcoming, most likely to confront and overcome such evils as belong to extreme democracy. They are, however, in a state of growth which makes it hard to say of them anything which shall be generally true, for no satisfactory line can be drawn between the fully developed university comparable to those of Germany and the raw academies so common in the less cultivated parts of the south and west. The practice of conferring degrees is of course no criterion, for any college may confer a degree if it pleases. Hence the observations one would make on Harvard, Yale, Johns Hopkins, Brown University in Providence, Columbia College in New York, or on the leading State universities, such as those of Vir-

ginia, Michigan, or California, would be quite inapplicable to the minor establishments, often no better than an English grammar school, which try to take rank beside these more ancient or wealthy institutions. It may, however, be said that what is wanted in American higher education is not so much quantity as quality. There exist centres at least sufficiently numerous for the teaching of the higher subjects: the teaching given is sufficiently cheap: it is much valued, and affects a large proportion of the population. In these respects America may seem to resemble Germany and Scotland rather than England, where the lower middle and poorer classes remain outside the sphere of university influence. But there are still few among the transatlantic universities—and this applies to Canada no less than to the United States—which have an adequate staff of professors, which duly recognize the less popular subjects, which have expanded their old curriculum or evolved new curricula so as to keep pace with the recent development of the sciences, the moral, political, economical and philological, as well as the natural sciences. In these respects the example of Germany is no less valuable to America than to Great Britain, and Dr. Conrad's book will be no less interesting there than here. It is, however, right to add that eastern America has of late years, and largely under the stimulus of the great German

schools, where so many American professors have completed their education, made rapid progress in this direction. The experiments tried at Harvard and Johns Hopkins since 1872 are full of instruction, and their success, which begins to seem assured, cannot fail to exert a powerful influence over the development and reform of the university system over the whole of North America.

Very interesting are the questions bearing on the relations of the schools to the universities to which Dr. Conrad dedicates two of his later chapters. To discuss them, however, and to show what are the corresponding problems in England and Scotland respectively, would lead me far beyond the limits of a preface. Suffice it to observe that in Germany schools and universities form one vast and highly inter-organized machine, each part of which tells upon the other, whereas in England and Scotland the school system—if one can call it a system—is united by few and feeble links to the universities, while in America schools so shade up into colleges and universities that no line of division can be drawn between them, and any such adaptations of the one set of institutions to the other as exist are the result of natural tendencies and not of deliberate purpose. Whether Dr. Conrad is right in the remedy he proposes for the evils of the German gymnasia, a foreigner must not undertake to pronounce. But it is curious to observe that the favour

shown to the gymnasia has produced that evil of over-production which protection tends to educe in other spheres.* Boys with little aptitude for a professional career are, according to our author, drawn into the professions by the undue cheapening of a gymnasial education, just as in the United States the gift of gratuitous instruction in the high schools aggravates the indisposition of the native American youth to handicrafts and an agricultural life.

Though I have dwelt chiefly on such points in this book as bear upon our English and Scottish problems, these are far from being its main source of interest. No student of contemporary history can fail to enjoy and profit by the light which Dr. Conrad throws on the circumstances and tendencies of Germany itself, the central country of Europe, the State which dominates Continental politics, the nation which does the largest part of the intellectual work of the world. It is much to be wished that some man correspondingly familiar with our educational position, equally accurate in compiling figures, equally skilful and cautious in interpreting them, would produce a work which should do for England, Scotland, and Ireland what he has done for Germany, and which would possess the additional

* Dr. Conrad points out some considerations which deserve to be well pondered in Britain before the State embarks on a course of wholesale subventions to education above the elementary stage.

interest of contrasting the results of the different systems which each of the three kingdoms has worked out for itself. Our internal diversity in these matters is greater than that of any other civilized country; and the value of a comparison between the various experiments which we have tried would be correspondingly great.

JAMES BRYCE.

THE GERMAN UNIVERSITIES.

GERMAN EMPIRE
SHEWING SEATS OF THE GERMAN UNIVERSITIES.
SCHLESWIG
HOLSTEIN
Kiel
Rostock
Greifswalde
POMERANIA
Koslin
Dantzic
Kœnigsberg
Pregel
Braunsberg
EAST PRUSSIA
WEST PRUSSIA
Bromberg
Schwerin
MECKLENBURG
Strelitz
N. Lake
Oder R.
OLDENBURG
HOLLAND
HANOVER
Hanover
Brunnick
BERLIN
Frankfurt
Vistula R.
Munster
Detmold
WESTPHALIA
Wittenberg
POLAND
Gottingen
Sonder-hausen
Halle
LEIPZIG
Saale R.
Elbe R.
Oder R.
Breslau
RHINE PROVINCES
Aachen
Bonn
HESSE KASSEL
Marburg
Erfurt
Jena
THURINGIAN STATES
DRESDEN
SAXONY
Chemnitz
SILESIA
Giessen
DARMSTADT
CRACOW
FRANKFURT
Mayntz
Main R.
Aschaffenburg
PRAGUE
Trier
Wurtzburg
Bamberg
Moselle R.
Erlangen
Heidelberg
Karlsruhe
LOTHARINGEN
ALSATIA
FRANCE
Stuttgart
WURTEMBERG
BAVARIA
AUSTRIA
Strasburg
Tubingen
Neckar R.
Isar R.
Inn R.
Freyburg
MUNICH
VIENNA
Danube R.
SWITZERLAND
6
8
10
12
14
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INTRODUCTION.

THE high import of the universities for the entire intellectual development of Germany is generally recognised. In order, however, to a full appreciation of this import for different periods, a statistical exposition of facts connected with the universities is evidently the first requirement. The historian of culture can then complete the work of the statistician: with the figures before him he can take account of the whole intellectual and industrial development of the people, and so clothe the skeleton and create a finished picture of the national culture. In the sequel, we propose to come forward only * as statisticians, to supply the historian with the figures, but not to encroach upon his province. This statistical basis, however, can only be attained by extending the inquiry to a somewhat large but compact domain, such as the German Empire has for some time actually formed in this respect. Nothing indicates more clearly how little customary it has hitherto been to regard Germany as one whole, than the absence of all attempt to take a comprehensive and connected survey of the German university system from a statistical point of view.

We have statistical works on the Prussian and Bavarian universities, and monographs in abundance on the separate

*[In some of the chapters the reader will find the author rather better than his word.]

universities. We miss a work, however, that treats them as a whole, and yet there is scarcely a stronger bond of connection between the various parts of Germany than that supplied by the universities, and in no other respect have the barriers that separated State from State been so long broken down. A separate estimate of the Prussian universities does not give a completely correct idea of university education even for Prussia: the historical development cannot be accurately traced, if the growing extent in which the South German universities are attended by students from the North, is not kept in view. The task we have proposed to ourselves, therefore, that of bringing the facts for all the German universities into a single view, will appear to be justified and to meet a demand of the times.

On the part of the Government, so far as we know, nothing has yet been done to form a body of university statistics; or where this has been done by the Statistical Bureau, the broad basis has been wanting. Possibly among the archives of the Education Department there may be found papers on the subject; but they have never reached the public eye. Of monographs, on the other hand, with limited aim a number have been published, and our next duty is to notice these.

The first to be mentioned appeared in 1836, and has for its author Wilhelm Dieterici, who later on filled the post of Director of the Prussian Statistical Bureau. It is entitled "Historical and Statistical Intelligence on the Prussian Universities." The author had in view, especially for the six semesters 1831-34, to ascertain and tabulate the facts connected with the attendance, the teaching body, and the finance at each of the Prussian universities. In his summing-up, however, he goes beyond this, and investigates the

proportion which the number of native Prussian students bears to the existing official posts. He had not, unfortunately, before him the returns on the number of those who had passed the State examinations and so had gained an expectancy to a post; he would then have been able to allow for the error which could not but enter into his calculations from his want of information regarding the number of native Prussians studying at other than Prussian universities. This number he made no attempt to supply from conjecture, and so his figures came short of representing actual facts. He gave a completeness, on the other hand, to his work by appending the statistics of the Episcopal seminaries. Additional value attaches to the work from a comparison instituted by the author with statistics of the Prussian universities for the period 1797-1805, for which he derived the material in great measure from the ministerial archives.

The second treatise to be noticed is that of J. G. Hoffman, Dieterici's predecessor as Director of the Prussian Statistical Bureau. One of his collected tracts on political science is entitled, "An Account of the Students at all the Prussian Universities between 1820 and 1840, with remarks on the Universities in relation to the wants of the time." The tract is important for our purpose, as it supplies the numbers for the *twenties,* which otherwise we should not have been able to obtain, and it deals in large averages. Finance, however, and the teaching body are omitted.

A continuation of this work was issued by the well-known statistician, Professor Schubert, of Königsberg, under the title of "A Contribution to the History and Statistics of Academical Study and of the Learned Professions in Prussia from 1840 to 1856." The treatise gives detailed figures only for the last twelve semesters of that period; but it is of importance as seeking in the changes in the laws and in

social and economical phenomena for an explanation of the fluctuations in university attendance; this it does, too, for a longer period and in a far more thorough way than Hoffmann. Hoffmann's second successor, Privy Councillor E. Engel, made a special study of our subject in his journal in the year 1869. He considered the relations subsisting between the schools and the universities, and fixed the proportions between the students at the universities and the scholars at the schools of all grades. By this step a real advance in the inquiry was undoubtedly rendered possible; but Engel unfortunately took account only of particular years —namely, 1822, '43, and '64, and so rendered his basis less trustworthy than was desirable. We shall have to draw upon this work repeatedly.

University statistics have taken a distinct step in advance from the work of Dr. George Mayr, formerly superintendent of the Bavarian Statistical Bureau. Its title is, "Education Statistics of the Kingdom of Bavaria for the years 1869-72 with glances at the returns of previous years." In this work special attention is given to the teaching body, its development since 1827, and its relation to the number of students. Mayr went deeply into the original material and adjusted and completed it by special inquiries. Only on such a carefully-prepared basis as this was it possible for him to conduct the inquiries so full of interest to a community; at what seminaries the youth of the country received their higher training; from what districts those in quest of knowledge came to the national universities, and in what proportions natives and strangers were found at Bavarian universities. For six semesters this inquiry is conducted in the most exhaustive manner. The author then goes farther, and for the separate districts of the country down to the Administration Districts, fixes the proportion of students to the entire

population, and to the male population from sixteen to thirty years of age. We have also the variations in the attendance followed out for the long period of forty-four years. Mayr took a distinct step in advance of his predecessors in following out the studies of the universities in their results, although this was confined to the degrees and the testing of law candidates. The finances, finally, of the educational institutions are considered, and under this head the exemptions from college fees receive attention.

With these models before him, but in reality going far beyond them, Schimmer, in the monthly Journal of Statistics for 1877, gives a most excellent series of university statistics for Austria. It includes the period 1851-76, and all the questions are answered which Schimmer's predecessors had proposed. For the last twelve years the author had before him for manipulation a homogeneous and excellently arranged body of materials such as no other country can show, and the want of which in Germany is badly felt.

We have now to call attention to a work which no doubt deals only with a single university, but which, as regards method, may claim a prominent place. We refer to the statistical account of the university of Tübingen, by Dr. K. V. von Riecke—a memorial volume of the fourth century of the foundation of that famous school. Besides the questions treated by the writers above-mentioned, Riecke considered the social position to which students of the university of Tübingen belonged; and on this point he was able to give some interesting information as regards the native students, and specially detailed for the theological faculty. He considered, further, the rates of mortality among the students. In a special section he treated very thoroughly some of the results of the university work, with particular reference to the university prize essays, the number of essays given in, of

doctorates conferred, of those who passed, and the grade attained by those who passed the State examinations.

Important as these works unquestionably are, they can still be regarded merely as single stones; they require to be pieced together, and to complete the work a comparison has to be made between the different States and the different periods.

Having thus learned what has hitherto been attempted in this domain, we shall now state what aim we propose to ourselves here. The more immediate cause of our inquiry was the striking increase in university attendance during the last decade. This naturally suggested the questions—How great was this increase? Has anything similar ever happened before? The answers to these questions formed the starting-point for our work. Our next task was to make as complete a collection as possible of all the figures bearing upon our university life, and to subject them to statistical manipulation, that is, to compare long rows of numbers and the resulting facts, and so to trace the group characteristics and determine their peculiarities. In the sequel, therefore, the increase of attendance at the universities for the last fifty years is first investigated and compared with the increase of the population. Our second step was to inquire—Whence came the accession of numbers? How has the inclination to a university life developed in the different parts of Germany? How many foreigners came to study at our universities? From defective material we could do little more than glance at the length of the university curriculum and at the social stratum to which the students belonged.

Next to the number of the students, the number of the teaching body demanded our attention; there we have an evidence no less of the extent to which the division of labour has been carried and of the advance in science and learning, than of the care bestowed by our Government upon the uni-

versities. The important question—How far do our universities meet the wants of the time?—must be reserved for consideration at the close.

The sources to which recourse is naturally had in determining the attendance at the universities are the official lists that are now published yearly. In Prussia for the last two decades the summaries that appear in the *Central Blatt*, and that cover the entire domain of education, furnish sufficient material to answer the principal questions, but we have for the most part relied upon our own compilations from the original sources.*

In the same periodical there are further presented, in a continuous form, the yearly statistics of education, forming a continuation of the excellent work of Wiese—a work indispensable for such an inquiry as the present.† Further completeness was obtained from the treatises and special contributions of the *Journal* of the Prussian Statistical Büreau. For the other German States the corresponding official statistical publications were naturally utilized. As a whole, however, these still supply very imperfect materials. The scanty materials furnished in most of the monographs on particular universities were still more disappointing. These monographs form in point of number a large library; but they indicate an indifferent eye for statistics on the part of their authors, and they take a contracted view of the whole development of our intellectual life. The connection of the particular university with the academical life of Germany is completely ignored, each university being regarded

* The German University Year Book (Leipzig, 1875) offers, at all events for the years 1871-75, a very complete series of materials not only for the universities, but also for the Technical High Schools of Germany, Austria, Switzerland, and the German provinces of Russia.

† Das höhere Schulwesen in Preussen. Berlin, 1864, '69, '74.

not as a wheel in a large machine, but only in its own separate life, as isolated and self-contained. From the perusal of the large number of histories of separate universities you gain, in fact, wondrously few statistical data, and just as few hints on the changes that mark our university life as a whole. The labours of a Meiners belonged to a period anterior to that under our consideration: they have hitherto, unfortunately, found no imitation. We find, on the other hand, among the official records of the universities, and particularly in the rectorial addresses, many productions of striking merit. In these the subject is viewed from a higher standpoint, and much valuable light is thrown upon the working of the universities, modifications in the curriculum, and other relative matters.

Regarding the first of the above-mentioned sources a special caution requires to be entered. We refer to the basis of our work which is in some respects imperfect, and so far affects the completeness of our inquiry. The practice of printing and publishing summaries like those we mentioned did not unfortunately begin all over the country at the same time; and some universities have been slow to conform, in this respect, to the practice of their sisters. We aimed at restricting our inquiries to the beginning of the *thirties*, and we have not examined for each university how far the lists go back. For Munich, we have them as far back as the *twenties:* we have the same for Tübingen, Bonn, and Berlin. Most cease at the beginning of the *thirties:* in Münster and Greifswald they cease in 1844.

But there was another circumstance much worse for our work than this want of uniformity. At almost every university the compilation of the statistics was formerly effected on a different principle—as suited the humour, in fact, of the under-official who voluntarily undertook the work.

Even yet the close of the semester is not uniform, and we are obliged occasionally to fall back upon the individual students in order to obtain uniform totals for all Germany. Prussia is the only State in which, since 1868, a single system has been followed, with special details on the branch of study, birth-place, &c. The manipulation of the figures, therefore, from that date is very easy. It were very desirable that the rest of the universities would in future adopt the same plan, only with separate sections here and there to bring out special local peculiarities.

The returns on the attendance at the faculties of law and theology presented no trouble; but in the medical faculty difficulties were repeatedly turning up. At Würzburg up till 1858, and at Freiburg, Tübingen, and Heidelberg, till the most recent date, students of pharmacy are reckoned in the medical faculty. Later on, too, at different places (Heidelberg, 1855), students of chemistry are still matriculated in the medical faculty. At an earlier date a perplexing element was found in the surgeons and birth-helpers who were not *maturi*,* and still were, in many cases, entered and apportioned to the medical faculty, for example, at Marburg, Heidelberg, and Tübingen, while at different dates in different places they disappeared altogether, or entered only as unmatriculated students.

The confusion, however, is notoriously greater in the faculty of philosophy. To this faculty, as a rule, are relegated all matriculated students other than students of theology, medicine, and law. In most of the universities to this day the students of political economy are reckoned in the philosophical faculty; but at the two South German universities (Tübingen and Munich) they are, as is well known, entered in the separate faculty of Political Science. In like

* [See note on p. 13.]

manner, at the present time, students of pharmacy, chemistry, and others without the certificate of ripeness, are entered in this faculty. These, in former times, were not matriculated at all. The different universities have followed different practices in the matriculation and the enrolment of their students. In some universities students of pharmacy, chemistry, political economy, agriculture, forestry, dentistry, &c., have sometimes been matriculated as full university students, while in others they have been entered as unmatriculated. In some places, again, they have been matriculated in one faculty, and in others in another. Tübingen has in this respect given us special trouble to bring its numbers into comparison with those of the other universities. Before 1859 the unmatriculated students were included in the final summaries, but since that date they have been excluded. Compensation, however, is made for this, as, in the official lists arranged according to the subjects of study, they are separately entered. At that university and at Munich the faculty of political science* contains students of political economy and students of forestry. After 1860, again, the students of science at Tübingen were classed with students of medicine

* [The entire domain of political science is divided by German writers on the subject into the following branches: (1) *the purely philosophical*, including the law of nature and international law, particular and universal constitutional law, national economy; (2) *the purely historical*, including the history of the European and American State systems, statistics, positive constitutional law, practical (or European) international law, diplomacy, State administration; and (3) *the mixed*, including politics, political economy and finance, police. Pöliz, *Grundriss für encyklopädische Vorträge über die gesammten Staatswissenschaften* (Leipzig, 1825). For the higher branches of the civil service in Prussia, Staatswissenschaft is defined as comprising 'Volks- und Staatswirthschaftslehre (Nationalökonomie und Finanzwissenschaft) sowie das Staats- und Verwaltungsrecht.' A comprehensive name for Volks- und Staatswirthschaftslehre is Cameralia (defined as *das Innere des Staats*), and students of these subjects are called Cameralisten. The present position of the faculty of political science is noticed shortly in the present work towards the close of chapter XIII.]

and surgery, and only quite recently they have been again separated. We shall, therefore, have to separate them from the medical faculty and attach them to the faculty of philosophy.

It follows from what has been said, that in respect of matriculation and the official lists, neither has a uniform principle been followed at all the universities, nor even at each separate university at different times. A special difficulty is thus caused by students of surgery, pharmacy, agriculture, veterinary surgery, and forestry. With the exception of Tübingen, the non-Prussian universities have always allowed great liberty; in Prussia the case was different, and only of recent years has the policy of the non-Prussian universities been followed there. The question now presented itself—What plan should we adopt in making our compilation? No doubt the greatest correctness would have been attained by the insertion of all the students omitted at an earlier date, as well as by the excision of all students formerly matriculated, but who are now excluded, or have altogether ceased to exist as a separate class. This, however, appeared impracticable. Were it once not to be carried through with complete accuracy, elements would require to be excluded which, corresponding as they do to the circumstances of the time, have every claim to be set down as students.

Surgeons, for example, considering the former position of that occupation and corresponding to the lower demands made upon those who followed it, represented in some measure mediocre specialists of the present day. A few decades ago the treatment of the matriculation examination was, it is well known, extraordinarily lax, and students came up to the university with very imperfect previous training. In the medical faculty, likewise, thirty or forty years ago, surgeons,

after passing their examinations as such, exercised the functions of the more highly-trained physicians, and attained to a creditable position. Where, however, they were formerly excluded from matriculation they cannot well be again admitted, as among them there were lower surgeons—that is, mere barbers practising in these particular places. At present, on the other hand, the permission to matriculate, granted under certain restrictions, has a compensating effect —among the Prussian farming class, for example, and others, who now go to the university in large numbers, but who formerly seldom went at all. The general inclusion of the students of pharmacy proved necessary in order to maintain as great uniformity as possible, especially as the question was about a mere handful of students who had been, as was the case at Berlin, Bonn, &c., temporarily excluded. This was all the more easily carried into effect, as the number in attendance at the Pharmaceutical Institute, which stood in close connection with the university, was regularly returned separately. For the rest, we have in the general summary accepted the number of matriculated students as it is presented in the official returns. We have reserved to the special inquiries into the separate faculties, especially into that of philosophy, the introduction of more precise numerical determination of the individual categories. We were led to adopt this course all the more as the sources of error thereby introduced would prove unimportant; by adopting a different plan greater sources of error would easily have been introduced. We now pass to the consideration of the figures themselves.

CHAPTER I.

THE ATTENDANCE AT THE GERMAN UNIVERSITIES FOR THE LAST FIFTY YEARS.

A SERIES of a hundred semesters is a fairly long space of time; and it is all the more important if it is a period marked by such comprehensive economical changes as took place between 1832 and 1882. We have before us for this number of semesters the position of all the universities in Germany as regards matriculated students, and of these we have now to take a nearer view. As a preliminary, however, we remark that in this number of matriculated students are found students of pharmacy, agriculture, forestry, political economy, and surgery, who must, in virtue of their matriculation, be reckoned as students although they did not possess the certificate of maturity.* Students of pharmacy also, although not matriculated, are included in the reckoning. They are entered as attending the pharmacological institute of the university, and it was only by including them that approximately uniform numbers could be obtained. Many sources of error, doubtless, still remain, and any claim to absolute correctness is, unfortunately, not to be entertained. The work, which should have closed with the winter semester 1881-2, has been lying almost ready for some time; and we

*[That is, the certificate of having gone through all the classes at a gymnasium, and of having passed satisfactorily the examination at the end of the course. The passing of this examination is the sole passport to the German universities.]

have included in the tables the numbers accessible to us down to the winter semester of 1883-4, without, however, including them in the reckoning.

Looking at the totals of the whole series, we see the period beginning with 14,211 students, and ending with 24,187. It would, however, give a false impression to consider only these two points, as they indicate accidental extremes. The number for 1831-2 is the highest point of a flood-tide; an ebb-tide preceded it at the beginning of the *twenties*, and it was followed by another ebb-tide. Quite lately, too, another flood has set in which had not reached its highest point in 1881.* It is matter for regret that we were not in a position to trace back the attendance for all Germany to the beginning of the century, or even to the year 1816, as in that case we should have had an essentially deeper view into the development of the whole time. Our main sources, however—viz., the attendance-lists, so widely failed us, that we were obliged to resist our inclination to carry our inquiry farther back. As it is, even for 1830-1 the figures can only be approximately fixed by the aid of conjecture at 15,444. From the Old-Prussian universities, for which we have the totals back to 1820, we are able to form tolerably safe conclusions for the remaining universities of Germany. In Prussia in the summer semester of 1831 a decrease in the attendance had already commenced as compared with the previous years. The average number of students for the five semesters—

1820-22	was 3,456 (say)	= 100.
1829-31	„ 6,082	= 176.
1838-40	„ 4,482	= 129.

* [There is a steady increase to the semester '83-4, when the total number of students at the German universities was 25,458.]

The three Bavarian universities and Tübingen showed from 1829-31 an average of 3,752, and for 1837-38, 2,838.

The following was the attendance at these four universities at the respective dates :—

	1817-8	'20.	'23-4.	'29-30.	'31-2.	'33.	'36.
Tübingen . .	465	709	—	887	814	822	624
Berlin . . .	942	910	—	1,909	1,469	1,801	1,677
Halle. . . .	575	795	—	1,214	1,043	888	663
Bonn	—	—	574	941	818	764	574

From what has been said it is to be regarded as a fact that immediately after the Wars of Liberation the attendance at the universities was unusually small : in the *twenties* there was an extraordinary increase in the numbers all over the country, to go rapidly down again after 1831. The lowest figures we notice in the entire period are in 1841, when there were 11,062 students, and in 1843, when there were 11,017 ; but even in the year 1859 we find 11,245. A year later begins the increase which goes on slowly but steadily till 1870, to assume extraordinary dimensions after the conclusion of the war. Indeed, since 1877-8, it is as if each semester an additional university, such as Strassburg, had come into existence. The following figures show the increase for each of the last ten semesters :—

'77-8 to '78.	'78 to '78-9.	'78-9 to '79.	'79 to '79-80.	'79-80 to '80.	'80 to '80-1.	'80-1 to 81.	'81 to '81-2.	'81-2 to 82.	'82 to '82-3.
714	452	734	403	816	443	907	532	919	*830

From 1860-1882 there is an increase of 12,091 students : in 22 years the number of students has doubled, or in other words the increase has been at the rate of $4\frac{1}{2}$ per cent. per semester.

The phenomenon, it must be admitted, is a very striking

* [For the two following semesters the increase was 1,094 and 147.]

one. In the period before us, at least, no such increase as that from 1,000 to 1,749 has been nearly attained in one year, and, as the increase continues down to the very last semester, it would not seem as yet to have passed its highest point. It must, on the other hand, be noticed that a similarly rapid change took place at least once before. From '31 to '31-2 the attendance sank by 1,092 students, and if we may conclude from Prussia to Germany, a still more violent change must have been experienced in the *twenties*, as from 1824-5 the seven Prussian universities increased 16 per cent., while the German universities from 1881-2 have increased only 6·4 per cent.; from 1823 to 1828 the increase in Prussia amounted to 34·4 per cent., from 1876 to 1881 to 31·3 per cent.

A far better general view of the development than by the consideration of particular years can be obtained from the following table, which exhibits large averages.

The first year 1830-1 surpasses all the following years in Germany till 1871. From 1841-61, excepting a small increase in the latter part of that period, the attendance was uniformly low and unaffected by the increase in the population. For that period the average number of students was under 12,000, and the proportion to population was 33·6 per 100,000. Taking decennial periods we find the average number of students for the entire period to be 13,500 or 36, per 100,000 of the population. The former number, as formerly stated, went as low as 11,072 in the year 1841, and the latter as low as 32 in the latter half of the *fifties*.

Since 1871 the averages, of course, show that powerful increase which we noticed above. It is noteworthy, however, that in proportion to population the semester 1882-3 was the first to reach the same figure as the two semesters '30-1 and '31 had attained, viz., 52·5 to every 100,000

MATRICULATED STUDENTS AT THE GERMAN UNIVERSITIES.

Year.	At all the German universities.	p. c.	At the seven Old-Prussian universities.*	p. c.	At the six South German universities.	p. c.	At the three largest universities—Berlin, Leipzig, and Munich.	p. c.	At the remaining universities, except Strassburg.	p. c.	Strassburg.	p. c.
1820-21	—	—	3,311	—	—	—	—	—	—	—	—	—
1830-31	15,751	100	6,031	38	5,342	34	5,377	35	4,378	28	—	—
1831-41	12,247	100	4,882	40	3,968	32	4,338	35	3,397	28	—	—
1841-51	11,790	100	4,535	39	4,144	35	4,043	34	3,110	26	—	—
1851-61	12,149	100	4,955	40	4,339	36	3,940	33	2,855	24	—	—
1861-71	13,420	100	6,050	45	4,002	30	4,537	34	3,367	25	—	—
1871-81	17,832	100	7,072	40	4,660	26	6,752	38	5,450	30	650	4·0
1882-83	24,187	100	10,384	43	6,287	26	10,221	42	6,688	28	828	3·4

ATTENDANCE AT SEPARATE PERIODS IN PROPORTION TO THAT OF 1831-41 AND TO POPULATION.

Year.	Proportion to 1831-41.	Per 100,000 inhabitants.	Proportion to 1831-41.	Per 100,000 inhabitants.	Proportion to 1831-41.	Proportion to 1831-41.	Proportion to 1831-41.	
1820 21	—	—	68	29·3	—	—	—	
1830-31	129	52·5	123	46·2	134	124	129	
1831-41	100	38·9	100	34·8	100	100	100	
1841-51	96	34·1	91	28·3	104	93	91	
1851-61	99	33·1	101	28·2	109	90	84	
1861-71	109	33·7	124	30·9	100	104	99	
1871-81	144	40·8	145	32·6	117	155	164	
1882-83	198	52·5	213	45·5	160	235	197	

*[See appendix, note 1.]

inhabitants. This must be kept in mind, so as not to overestimate the present flood-tide.

The sudden fall in the attendance comes out sharply when viewed proportionally. The first stands to the second great period as 100 : 96, against which the earlier period of 1830-1 is represented by 129*.

The SEVEN OLD-PRUSSIAN universities exhibit a very regular development. This is best shown from the proportion to all Germany, which varies, for the whole period, only between 38 and 45 per cent., and helps in some degree to equalize the fluctuations for Prussia. We have also calculated for Prussia the proportion to the population, from which, however, not much can be drawn, as students at the Prussian universities were not all Prussians, and Prussians in varying proportions studied out of the country—a point to which we shall return. It is noteworthy, however, that the period from 1841-61 shows, in comparison with population, smaller numbers than the year 1820-1, and even the last semester does not reach that of the year 1830-1, although it is more than half as high again as that of the years 1841-61. The SIX SOUTH GERMAN universities showed between 26 and 37 per cent. of the total number of German students; and, latterly, they certainly show a decrease as compared with the former parts of our period. Their highest point was from 1846-56. Taken as a whole, however, they show the same development as the rest of Germany. For the whole period, indeed, we have a clear indication of the unity of Germany in the intellectual domain.

* [By taking quinquennial periods and comparing them with 1831-6, the fall comes out more sharply still, being as 100 : 88 between the first and second half of the *thirties;* in the first half of the *sixties* it was still only as 100 : 92].

CHAPTER II.

THE CAUSES OF THE FLUCTUATIONS IN THE ATTENDANCE.

From what has been adduced it is certain that the attendance at the universities has undergone very considerable changes. In Prussia, and probably in all Germany, at the end of the *twenties*, the attendance was extraordinarily large; at the beginning of the *thirties* there was a great and very sudden decrease; and again in the *seventies* there was a very powerful increase. We have now forced upon us the far from easy task of inquiring into the grounds of this phenomenon; and after setting forth all our facts we shall consider it more particularly in relation to the most recent times.

As regards the *twenties* and *thirties*, which claim particular attention, we have first to hear the opinion of Hoffman, who treated specially of this period. He found the increase of students from 1820-39, *i.e.*, from the beginning to the end of his period, only what was to be expected, as wealth and culture had undeniably increased, and with them the need for more highly-trained citizens. He was struck by the increase from 1820-9, about 92 per cent., as he was likewise by the rapid decrease from 1830-9, the end of the period considered by him.

The deeper cause of the increase in the *twenties* he rightly sees in the revival of the national spirit, in the fresh stimulus it derived from the Wars of Liberation, and in the

new desire for peace which resulted from these influences. The external enemy once effectually repelled, the concentration of energy that had succeeded in accomplishing this was directed to the elevation of the national life within. The Civil Service and the higher education received devoted attention. The State had formed new relationships, in consequence of which there was a great need of officials; and the rapid demand for these attracted youth to this career till the number of students was greatly in excess of the demand. The total number, indeed, at that time, in attendance at the old Prussian universities was not reached again till 1875.

As well as to the pursuit of general culture, it is certain that the universities at that time owed something of their increase to the revival of religion. Whether, as has been supposed, the powerful influence of Schleiermacher and Hegel finds its expression in the figures, we do not decide, but there can be no doubt that the extensive foundation of schools, which necessitated a supply of teachers, was of far greater effect. It is further to be observed that in the first decades of the century, attendance at the university had sunk to an unusually low ebb. For a time a number of the universities* had been closed and they never came to life again, while the university of Bonn, which was founded in 1818, required time to draw students. Under these circumstances a special influence must have been exercised in Prussia by a movement which has not received the attention it deserves. We refer to the testing of the fitness of youths for entering upon university studies, by the universities themselves. This was conducted with extraordinary laxity. Many left the schools while in the lower classes, prepared themselves privately and insufficiently, and then, in many cases, underwent the exami-

* [See appendix, note 2.]

nation before the university examining commission. Even those leaving with a third (or lowest) class certificate in the gymnasial examination, *i.e.*, who had passed in none of the three principal subjects, and were, therefore, pronounced unripe, went up to the university in the hope of taking the examination afterwards, and of getting the time of their attendance at the university counted. Besides, every one, on showing his matriculation ticket, became entitled to the one year's voluntary military service; while even the most incapable were not refused a third-class certificate, and to these in turn matriculation could not be denied. For this reason many youths of the farming and artisan classes attended the university for a short time only to obtain the privilege of the one year's service. The effect of the laxity of the university examinations may be gathered from the fact that in 1820, for 590 gymnasial abiturients there were 345 *extranei** or 38 per cent. of all the *maturi*. It is further to be observed in this connection that all the gymnasial-abiturients did not proceed to the university, while the *extranei* may be supposed to have gone in for the examination merely for the sake of entering the university. From 1821-4 the number of the latter went up to 465, and from 1825-9 to 536. At Bonn at that time not one-half of the students were gymnasial-abiturients, and from the reports of the Provincial Schools authorities, it appears that for a considerable time the number of abiturients examined by the Schools Examining Commission was each time smaller than the number tested for matriculation at the universities.

During the dearth of students that followed the Wars of Liberation the indulgence of the Examining Commission was in a manner justified, but it became highly doubtful when

* [That is, those who prepare for the leaving-examination of the gymnasia otherwise than by going through the gymnasial course.]

there was an actual superabundance of students. The provincial school authorities made repeated complaints on the subject. It was proved that the allotted time of a half or of a whole year allowed for the acquiring of a better than a third-class certificate was often not kept, that the examination was repeated at the end of the second, of the third, even of the fourth year of university attendance, and often, even then, with indifferent success. This led to the order of 1831, which enacted that such youth as had gone to the university with a third-class certificate should not be admitted to the examination later than 18 months after entrance, while those who in the second examination gained no higher than a third class could not be examined again.

Even in the Schools Examining Commission it had become widely customary, in order to avoid the ominous third-class, to give unreasonably wide scope to the second, which entitled to full matriculation. In consequence of this as early as 1831 a reform in the mode of conducting the examination was set about, and a new regulation was issued and came into force in 1834.* The main point of the regulation was that henceforth the matriculation examination should be held only at the gymnasia: by this means, also, an approximately uniform test was applied to all intending university students. The regulation of 1856 was aimed expressly against a too mild treatment of the *extranei*. The regulation of 1834 exercised a marked influence upon the universities. The measure was a thoroughly effective one. From 1830-4 among 1,584 *maturi* the number of *extranei* was 363, in '35 it was only 63 among 956, and from '36-40 it was 90 among 1,136. It is clear, therefore, that we shall reach a false conclusion if we set the numbers in attendance at the universities in '22 over against those in '64 without any

* Wiese, 1864, p. 492.

reserve, and without taking account of the changes in the examinations.

It remains, however, to be noticed that even after 1834, *immaturi* could still be matriculated—up to 1855 only on the ground of a special Ministerial permit, and further only in the philosophical faculty, and with a special mark on the matriculation ticket. By the order of 1855 the granting of this permit was handed over to the university curators.* Those also who had not passed the matriculation examination could, on the ground of non-maturity, be matriculated in a special list, and could try the matriculation examination once more during attendance at the university. Of later modifications the only one affecting our present inquiry is the Order of the Minister Von Mühler of 1870, whereby the certificate of ripeness of an abiturient of a Real School of the first-class was, so far as relates to enrolment in the philosophical faculty at the universities, henceforth allowed the same weight as certificates of ripeness proceeding from the gymnasia. The order of 1879 made no essential change.†

* [The representatives of the Education Department at the university.]

† According to the order of 1879 the paragraphs affecting the statutes of the universities run as follows :

§ 2. Before a Prussian can be received into the university he must produce a certificate of maturity from a German gymnasium.

For those Prussians who wish to study mathematics, science, or foreign languages the certificate of a Real School of the first class can be substituted for that of a gymnasium.

After matriculation follows enrolment in the particular faculty in which the student intends to study.

§ 3. With special permission of the curator (the curatorial body) Prussians who have not a certificate of maturity according to § 2, but who can otherwise prove their fitness for the hearing of university prelections, may be admitted for four semesters and enrolled in the philosophical faculty.

In the granting of this permission it is to be clearly understood that their admission to the university implies no future claim to any post in the ecclesiastical, civil, or educational service of the country.

In the leaving certificate of such students it is to be marked that their

But to return to the consideration of our numbers. From 1830, as we saw, there began retrogression all over, as well in Prussia as in the rest of Germany, although our numbers go back only partially to 1830. This was unquestionably the consequence of a distinct overcrowding in all departments of study. The Prussian Government had felt itself repeatedly constrained to issue public cautions against entering the university with a view to the civil service; and the large number of officials, teachers, preachers (*Scoticè*, probationers) who had undergone all the requisite preliminary training, and were vainly waiting for fixed appointments or for promotion, must have supplied an effectual warning.

At the same time trade, after a very serious depression, began to improve, and a large number of youths went into business, who a few years earlier would have found their way to the universities. Compared with this factor, indeed, the other factors in the problem can have exercised no very material influence. Just at this time, too, as has been shown, the belief got widely spread that the best preparation for a non-professional career is to be got at schools devoted to particular branches. Academies for forestry, accordingly, for agriculture, mining, architecture, &c., were established, and drew off a number of students from the universities.

admission has taken place according to the directions of this paragraph.

The curator (curatorial body) is empowered at the end of the first four semesters to grant permission to attend the university for two semesters further.

§ 4. Non-Prussians may be admitted as students and enrolled in any faculty if they prove themselves sufficiently educated for the hearing of university prelections.

§ 5. The following may not be admitted as students :—

1. Public officials connected with the Empire, the State, the Commune, the Church.
2. Persons connected with another Prussian public educational institution, unless by special arrangement.
3. Persons working at a trade.

The visitation of cholera in the year 1831, which has been adduced as a cause of the falling-off in the attendance, could only affect the universities temporarily. The Prussian Regulation on Examinations, which rendered entrance upon academical life more difficult, did not come into force, as we saw, till 1834. It might, therefore, accelerate the retrogression, as it really did, but it could not have been the cause of it, and still less direct influence must it have exercised outside of that State, as the other States followed, and did not anticipate, the example of Prussia in raising the standard of the examinations. It was clearly influences affecting the whole country which at this period told upon university attendance, and not any special legislation, or the excellence, or the reverse of the professoriate. This is evident from the great similarity of the phenomenon in the different parts of Germany, although an individual university here and there may form an exception. A relatively low attendance is to be observed till 1871-72. Up to that point the increase was only a little over that of the population. It is, however, to be remarked that, apart from theology, as we shall see, no want of university-bred men was anywhere seriously felt; all wants, rather, were fully supplied.

We now direct attention to the extraordinary increase of the last decade, as above noticed, from 14,880 in '72 to 24,217 in '82-3—*i.e.*, an increase of 62·7 per cent. in ten years, while the population in the same period increased only by about 13·6 per cent. Wherein are we to seek the cause of this phenomenon? The most recent increase in attendance at the universities we regard as springing only in the very smallest degree from any higher ideal aim of the time, and just as little from any greater interest in science or in theology, but mainly from three influences working to the same end.

The first of these is the social position held by university-bred men in Germany. For the sake of this, pecuniary advantages are willingly sacrificed, and although not a new influence, it still prepared the way for the increased attendance. The second is the universal spread of classical culture. This is caused by increasing demands for the means of preparing for the official posts, and it is favoured by the wide spread of the higher educational institutions, which can now be attended at relatively small cost even by the less wealthy classes. The third factor is the commercial depression which has now lasted longer than at almost any period in the time under our consideration, and that, too, when wealth, and consequently the wants of life, have materially increased. Artizans and tradespeople are anxious for even the smallest posts, which secure them regular employment and a steady if not a large income. There are hundreds of candidates from all classes for an advertised situation as porter or clerk; and at present the farmer, the small trader, the artizan has no inclination to put his son into his own precarious occupation, but prefers to send him to the university. Immediately after the war, when the increase of wealth was quite exceptional, many in the lower walks doubtless felt themselves quite able to give their sons a university education. At the beginning of the *seventies*, however, the increase is rather to be attributed to another cause. A large number of youth, who had been torn from their studies by the war, and spent two semesters in the field, were compelled, in order to recover lost ground, to stay longer at the universities than formerly, and further, several sets of the abiturients were thus thrown into the same semesters. How far this was the case will appear from a comparison of the abiturients with the number of Prussian students :—

	Old-Prussia.			Students at German Universities.	Old-Prussian Students.
	Gymnasiasts.	Gymnasial abiturients.	Entering the University.		
	(1868)				
1866-70	47,705 = 100	2128 = 100	1686 = 100	13592=100	6193 = 100
	(1873)				
1871-75	54,408 = 114	2001 = 94	1601 = 95	16112=119	6252 = 101
	(1880)				
1876-80	63,665 = 134	2265 = 106	1939 = 115	19553=144	7882 = 127

The abiturients in Prussia from the first period to the second even show a decrease, from which it may be assumed that the increase of students was mainly occasioned by those returning from the war, and not by an unusual press of students to the universities.

After treating each of the faculties separately we purpose in conclusion to look a little more particularly at this point. At present we return to the consideration of some more of our figures connected with the attendance.

CHAPTER III.

DISTRIBUTION OF THE STUDENTS.

THE average of the total number of matriculated students was as follows :—

Year.	Berlin.	Breslau.	Halle.	Greifswald.	Königsberg.	Bonn.	Münster.	Göttingen.	Marburg.	Kiel.
1831—36	1820	902	810	208	421	795	261	865	331	275
1836—41	1762	681	655	198	391	647	213	774	273	244
1841—46	1715	707	712	218	347	632	238	670	263	208
1846—51	1461	766	671	190	323	806	284	676	265	151
1851—56	1599	822	639	214	358	807	348	684	245	141
1856—61	1593	831	710	273	390	813	473	687	254	149
1861—66	1972	957	768	345	445	896	524	721	264	194
1866—71	2218	927	838	420	469	866	453	772	332	172
1871—76	1948	1037	968	508	606	776	409	1007	401	175
1876—81	3102	1279	1017	538	723	944	289	1002	510	262
1883—84	4867	1479	1544	725	909	1037	280	1064	720	352

Year.	Munich.	Würzburg.	Erlangen.	Tübingen.	Heidelberg.	Freiburg.	Leipzig.	Jena.	Giessen.	Rostock.	Strassburg.
1831—36	1556	445	278	805	661	474	1145	500	355	95	—
1836—41	1392	440	297	745	570	343	1002	433	367	95	—
1841—46	1329	472	316	889	727	235	917	421	484	88	—
1846—51	1695	582	396	832	661	291	970	402	476	87	—
1851—56	1700	743	475	764	684	331	843	396	383	98	—
1856—61	1292	648	528	697	584	313	854	427	356	121	—
1861—66	1245	625	474	777	742	303	991	482	378	144	—
1866—71	1215	613	369	755	632	277	1433	384	294	152	—
1871—76	1142	890	404	862	651	289	2686	423	318	141	587
1876—81	1582	930	452	1076	643	426	3044	491	350	176	713
1883—84	2468	1167	730	1217	732	615	3433	566	497	232	844

The tendency in more recent times to form large centres comes here strikingly into view. At the three largest*

* Berlin, Leipzig, Munich.

universities, even in the first period, were found as many as 35 per cent. of all the students. This proportion, however, went down from 1856-66 to 31 and 32 per cent., but ran up again steadily to 42 per cent. in the last semester. Berlin, with 4867 matriculated students, is at present far in advance of all the rest. Leipzig comes next with 3433, while at the beginning of the *seventies* it was in advance of the capital (2686 as against 1946). It would be matter for regret were this proportion to become still more pronounced, and were these three universities to comprise almost the half of all the students of Germany. On this score, however, the smaller universities have not as yet suffered. They have rather shared throughout in the general increase, while some of the intermediate ones, such as Bonn and Heidelberg, have at least stood still. The smallest attendance, apart from Münster, which has only the two faculties* of philosophy and catholic theology, is shown throughout the entire period by Rostock and Kiel; yet with 232 and 352 students respectively, these universities show a sufficient number to justify their continued maintenance and independent existence. The demands on the public exchequer have recently, no doubt, enormously increased, especially in connection with institutions for the promotion of science; but it should be remembered that these exist not only for the students, but are absolutely necessary as nurseries for science and experimental stations, and partly as hospitals for the poorer classes, even if they were of no advantage to the students at all. And if these universities could be maintained in the *forties* and *fifties*, when they had under 90 and 150 students, they

* [Some German writers refuse to accord to Münster the rank and title of a university. They go on the supposition of Meiners, that the term university should only be applied to foundations which give degrees in all the faculties, the name of academy being given to those which do not possess this power.]

are surely worthy of being maintained now when the numbers have happily so much increased. Giessen and Freiburg, which had occasionally to content themselves with under 300 students, have now 497 and 615. Jena at present enjoys an attendance of over 500 students; Erlangen and Marburg, indeed, over 700; while up to 1880 each of the three had under 400, and Marburg, in the Hessian period, under 300. In the *sixties* Greifswald and Königsberg still belonged to the small universities with under 500 students—these universities, along with Münster, having then the full half of the total number of students. At the beginning of the *sixties* only two universities had more than a thousand students: at present there are nine such, while, including Strassburg, there are nine between the three largest and the small ones mentioned.

The development above indicated appears to us a thoroughly healthy one, and one fully in accord with the times, on the supposition that the preponderance of the largest universities has already reached its limit. The wide-spread desire to enjoy for some semesters the all-round culture of the capital, and to have the benefit of all the teaching apparatus to be found in exceptional perfection at the chief universities, is one that is completely justified, especially in the case of the more advanced students. The balance may be maintained if the intermediate, and especially the smaller universities, were more than hitherto to aim at the fostering of some particular faculty, and to concentrate their resources upon the development of this faculty, even at the expense of the rest—of course in moderation—in order to be able to compete at least in one subject with each sister university. The students who attend a faculty fostered in this way bring with them, as experience shows, a number of school companions who know that they can learn something anywhere, and who have

no special reasons for preferring any particular university to another.

A further advantage attaching to the smaller universities consists in the opportunity they afford for the practical work of teaching, as distinguished from the mere delivering of lectures. There are here opportunities for exercising the students on the lectures, for holding private classes of selected students, for conversational examinations, in short, for all those excellent arrangements which bring the students more into personal contact with the teacher, a point on which special weight is now rightly laid. In these classes the attendance is limited to a comparatively small number, as in the laboratories, or the possibility of properly utilizing them rapidly diminishes with the increase of the numbers, the consequence being that at the larger universities the teacher selects his students, or a corresponding number of the students simply take themselves off to a smaller university.

These private lectures which were first used, and with the best results, in the departments of philology and history, have gradually been recognised in other departments of study, and are latterly gaining ground even in the teaching of law. At a time when complaints are rife on the want of true scientific feeling in the youth attending the universities, it is surely important not to treat them merely to the usual prelections: rather is it more than ever the duty of the teacher to come down from his chair and to hold personal intercourse with his students. He will thus be able to mark the peculiarities of the individual student and to influence him with the whole force of his character. On this plan, no doubt, other and higher claims are made upon the individuality of the teacher: he must possess more than mere learning, he must have character and ability to teach. Nothing but a ripe, harmoniously developed manly character, and one commanding

the respect of the students, can here accomplish corresponding results; and this too, as experience shows, can only be done so long as youthful freshness continues—only so long as the professor can understand the students and meet their needs. The small universities where our younger men are mainly employed, and where a smaller number of students falls to each member of the teaching staff, have special advantages in this respect. The number of German universities, therefore, is certainly not to be regarded as at present too large, but as a blessing for the country.

In speaking above of the grounds of the recent increase in the attendance, we anticipated a little by assuming that this increase went hand-in-hand with a general extension of university education. The possibility, however, clearly exists that this increased attendance may also have been due (1) to a longer residence of students at the university—one instance of which has already been given, or (2) to a more numerous influx of foreigners. We shall investigate these two points more particularly.

CHAPTER IV.

LENGTH OF RESIDENCE AT THE UNIVERSITY.

THE statistics we have collected do not unfortunately enable us to decide the point whether students of the present day stay longer at the university than formerly. The only point we gain from these statistics—the proportion, namely, which those beginning their university course bear to the remainder of the students—does not help us any, as the number of semesters spent by a student at one university may have been small while the entire number of his semesters was large, only in that case each student was matriculated several times. The year of residence at the university of the matriculated students would require to be known, and this is well-known to differ greatly at the different universities. Even were this information at hand, it would be an extremely difficult calculation to reach correct results. We wish, however, to give the subject our attention at this point.

The number of those matriculated for the first time is unfortunately not given in all the official lists, a circumstance which is all the more to be regretted as that number affords a very important view of some university facts. The numbers are completely wanting for Freiburg, and only for the most recent years do they exist for Munich, Giessen, Marburg, and Heidelberg.

In the last ten semesters, *i.e.*, from 1876-81 at all the

German universities, exclusive of Freiburg and including Strassburg, the average number of first year students was 5,945 ; the average of the remainder was 19,080. For this period consequently each student resided on an average for 3·21 semesters at one university ; at the Old-Prussian, 3·26 ; at the six South German, 3·58 ; at the two largest universities, Berlin and Leipzig, only 3·04 ; at the three smallest, Kiel, Giessen, and Rostock, 3·38 ; at the next above these (with the exception of Freiburg and Münster), Erlangen, Marburg, and Jena, 3·03. There is no marked difference according to size; it is rather the mere number at each university which is here expressed. Nor again does a very striking difference appear between North and South Germany, as is easily seen by observing particular universities. In Prussia there are two universities at which residence is longest—at Königsberg, 4·82 semesters, and at Breslau, 4·12. At Tübingen, likewise, it is 4·12; at Erlangen, only 3; at Strassburg, only 2·79. The shortest time is well-known to be spent by students at Heidelberg and Bonn: at the former the average is only 2·04 semesters, and at the latter 2·55.

An interesting question, however, is whether the proportion has changed as compared with earlier times. We have investigated the point for all the fourteen universities for which the information could be got, and find the average number of semesters spent by students at one university to have varied between 4·12 in the decade '31-41 and 3·28 in the decade '71-81. The decrease which thus results is, after all, no more than was to be expected: the age of steam was bound to find expression in such fashion. But, as already said, from this we can only conclude to the length of residence at one university, and not to the whole length of the university course ; and on the former point what we

learn from this special inquiry is that almost every student attends two universities, and spends at each nearly the half of his time, which unquestionably is to be regarded as the proper arrangement.

If our collection of statistics fails in determining the length of the university course, we may still reach our object by appending to what is given above the statistics of the higher schools. If, in course of time, the number of residents has increased in proportion to the number of abiturients* who proceed to the university, in that case the university course is longer. These figures we have only got for Prussia; and the inquiry becomes essentially less reliable by this restriction of it to one part of Germany. From 1830-40 there enrolled on an average 3·40 Prussian students with the certificate of maturity for one gymnasial abiturient who went to the university, and *extraneus* tested at the university. From 1856-65 the average was 3·43; from 1871-81, again, it was, including the *Real* abiturients who went to the university, 4·13. Possibly the number of Prussian students attending non-Prussian universities is assumed to be somewhat too high; still, the numbers bear out the conclusion that the university course is, on a large average, a semester longer than formerly. This, indeed, might even have been taken for granted *a priori*. In the medical faculty in Prussia the obligatory number of semesters has been raised; and the medical students, who take a longer course than the students of the other faculties, form a larger percentage than formerly of the total number of students. Of more importance, however, is the circumstance that in more recent times the military service keeps our youth from the university more than formerly; and this tendency of our time has to be made up for by a semester longer of

* [That is, those who pass the leaving examination at the gymnasia.]

residence. Perhaps, also, a larger proportion than formerly of those bound to render military service render it during their university course. Another point here worth consideration was whether an advance in the age of the students, which, indeed, was to be expected from the higher demands made upon them, had not something to do with rendering the military service during the university course more general than hitherto. The table, however, given below * on the age of abiturients proves that for the last twenty years the tendency has rather been in the contrary direction. From 1859-68, 45·6 per cent. of the abiturients were under 20 years of age; from 1870-9, 51·9 per cent; although in 1820-2 the percentage was 64. In 1820-2, 19·5 per cent.; 1858-68, 25·3 per cent.; 1870-9, 25 per cent. were 20 years of age. In 1820-2, 16·5 per cent.; 1859-68, 29·1 per cent.; and 1870-9, only 23·1 per cent. were over 20 years of age. The advance of the age, compared with the *twenties*, is striking; more recently a backward tendency has set in, but it is not sufficiently marked to influence the question under consideration.

Whether money is more plentiful, and a larger number of students are under less necessity than formerly to shorten their curriculum to the utmost, or whether students are

* Wiese gives the age of those who pass the leaving examination at the gymnasia as follows :—

Year.	Average number of abiturients		Under 17 years.		17 years.		18 years.		19 years.		20 years.		Above 20 years.	
	abs.	p.c.	abs.	p.c.	abs.	p.c.	abs.	p.c.	abs.	p.c.	abs.	p.c.	abs.	p.c.
'20-22	668	100	6	1	44	6·6	151	22·8	225	33·7	130	19·5	110	16·5
'59-63	1804	100	16	0·9	86	4·8	265	14·7	423	23·4	456	25·3	558	30·9
'64-68	1980	100	16	0·8	102	5·2	319	16·1	496	25·1	500	25·3	546	27·6
'69-73	2509	100	24	0·9	149	5·9	471	18·8	671	26·7	612	24·4	582	23·2
'76-79	2698	100	16	0·6	147	5·5	515	19·1	726	27·9	672	24·9	611	23 0

lazier, and require an additional semester to make up for lost time, or whether the examinations are harder, are points we do not venture to decide.

Residence, also, during the most recent periods may have been somewhat increased by the length of time required for the examinations owing to the excessive numbers. It is impossible to examine at once all who present themselves, and the examinees to a large extent continue to be reckoned as matriculated students. This is the case with the law students, and more especially with the candidates for the educational service. The attendance at the universities, therefore, for the last decade should perhaps scarcely be set so high as appears from the lists, but perhaps at the highest about 15 per cent. lower.

CHAPTER V.

FOREIGNERS AT THE GERMAN UNIVERSITIES, AND GERMAN STUDENTS ABROAD.

THE second question in the inquiry into the causes of the increase in attendance at the universities is how far the increase is to be attributed to foreigners—what percentage have foreigners formed at the German universities at different times? and in this particular it will be of importance to consider the individual groups of universities separately.

For the earlier part of our period it is very difficult to determine the number of non-Germans studying at the German universities, as on this point no collective returns were made in the official lists. The division was into natives and foreigners: natives of other German States than that in which the university was situated were reckoned as foreigners; and, quite in harmony with the ideas of the time, these were thrown together with Poles, Americans, and Greeks, while they were opposed to Badeners, Hessians, Hanoverians, &c.

It involved, therefore, a large amount of work to pick out from the older lists all who were really foreigners, and this could only be done for some semesters, and not for all. Nor was much after all to be gained from this, as the large groups yielded only unimportant variations from one year to another. More unfortunately still, several lists give only the student's

residence, without naming the country in which it was situated, so that slight errors here cannot be avoided. For some universities where the lists failed us wholly for the *thirties*, we were, of course, unable to procure this information at all. As this, however, was the case only at the two small universities of Rostock and Münster, at which the number of foreigners must have been quite inconsiderable, this source of error is unimportant.

In former times Germans in large numbers attended foreign universities, like Paris and Bologna, while our native universities possessed but few attractions for foreigners. For more than a century, however, all this has been changed. Every year students now come to our universities in considerable number to take their entire course, or to complete their course in their particular department. Others, again, come only for a semester or two, or to work for a longer time in the laboratories of distinguished professors, or to attend clinical lectures, private courses, &c., without undergoing registration. Of the latter class we can take no account: we are rather concerned only with the first-mentioned.

Of the 21,871 students, the average number matriculated for two semesters in 1880-1, 1129, or 5·16 per cent., were non-Germans. For two semesters in 1860-61 the average was 753, or 6·10 per cent., and for 1835-6, 475, or 4·02 per cent. The last number is probably somewhat too low, because, as already mentioned, the registration was not sufficiently detailed to fix, in all cases, the country from which students came.

These figures show that while there has been a considerable absolute increase in the number of foreign students, the importance of this element has relatively decreased for the last 20 years, while it has increased but little for the last 45 years. The fluctuations, however, under this head are

too unimportant materially to modify anywhere the collective attendance. The fluctuations in the total attendance, therefore, must be referred solely to internal considerations and to native students. We are now in a position, without serious error, to take the total attendance as the starting-point in our inquiry.

While on this point, however, we may go a little more into detail, and show the countries from which foreigners come, the universities to which they go, and what subjects mainly they study.

The Prussian universities have, in the course of time, lost in attracting foreigners, while the South German ones have correspondingly gained.

At the Prussian universities there studied of non-Germans

1866-71.	'71-76.	'76-81.	'80-81.
402	500	420	367

or, taking particular years instead of these averages, we find of non-Germans—

	1835-6.	'60-1.	'80-1.
At the 10 Prussian Universities, . . .	230	319	367
At the 10 non-Prussian Universities, . .	266	434	668
At Strassburg, ...	—	—	98

It is naturally the large universities which have the greatest attractions for foreigners. The following is the average number of foreigners for two semesters at

Year.	Berlin.	Bonn.	Halle.	Göttingen.
1835, . .	129	16	20	—
1840, . .	—	—	—	7
1850, . .	75	25	22	—
1860, . .	116	—	72	46
1880, . .	235	49	51	49

The tendency of the time to flock to the large centres comes strikingly out here. Of the non-Prussian universities, Leipzig is far ahead. Then come Heidelberg and Munich.

	Leipzig.	Heidelberg.	Munich.	Würzburg.	Freiburg.	Jena.	Tübingen.	Erlangen.
1835, . .	24	73	57	9	53	25	24	4
1860, . .	27	107	107	53	33	38	44	12
1880, . .	242	122	115	62	29	28	36	22

In the *thirties,* Freiburg figured in this connection. It derived advantage from its proximity to Switzerland, which now similarly benefits Strassburg.

The separate faculties are naturally represented in very different proportions—the same tendency being observable here as in the statistics as a whole. Philosophy comes more and more into the foreground, while theology goes back. The foreign students at all the universities were distributed as follows through the faculties:—

Year.	Theology.		Law.		Medicine.		Philosophy.		Total.	
		p. c.		p. c.		p. c.		p. c.		p. c.
1835,	85	14	138	36	163	34	75	16	461	100
1860,	170	28	163	24	169	24	251	24	753	100
1880,	102	9	192	17	304	27	535	47	1133	100

The following short table gives the foreign students, arranged according to nationality:—

Country.	1835.		1860.		1880.	
	abs.	p. c.	abs.	p. c.	abs.	p. c.
Austria, ...	41	9	114	15	178	16
Switzerland, ...	233	50	236	31	213	19
Russia, ...	64	14	156	21	204	18
Great Britain, ...	26	6	42	5	71	6
France, ...	21	4·5	9	1	21	2
Scandinavia, ...	21	4·5	14	2	22	2
Belgium and Holland, . . .	16	3	23	3	34	3
Other European States, . . .	30	7	77	10·5	167	15
United States, ...	4	1	77	10·5	173	15·5
Other Non-European States, . .	6	1	8	1	42	3·5
Total, ...	461	100	753	100	1,133	100

Students of theology come in largest proportion from

Austria, especially from Siebenbürgen. For the three above periods the numbers were 19, 58, 36 ; from Switzerland, 47, 82, 25 ; and lately from England, 12 ; and from America, 10. Law students we find especially among the Swiss, 85, 58, 83; from the other European States, mainly Servia, Roumania, &c., 8, 17, 49. Of medical students, a considerable number hail from Russia, 33, 57, 78 ; then come the Americans with 2, 14, 57. Those from the " non-European States " are mainly Japanese. The attendance of Swiss medical students has markedly decreased, 74, 53, 33.

In the Philosophical Faculty the most considerable contingent of foreign students is from Russia, 12, 63, 106 ; then comes Austria with 7, 33, 93 ; and America with 0, 47, 94. Switzerland sent 47, 41, 71 ; England, 5, 25, 37 ; France, 11, 4, 16 ; Holland and Belgium, 2, 6, 18 ; Scandinavia, 1, 8, 9 ; the rest of the European States, 10, 30, 64. Lastly, the non-European States, exclusive of the United States of America, 2, 14, 24.

In the heterogeneous collection of subjects included in the Philosophical Faculty, a further division is very desirable ; but it would have involved labour out of all proportion to its results to make this investigation for all the universities. We content ourselves, therefore, in this connection, with adducing certain of the more important universities, and, for Prussia only the earlier semesters, while such summaries were still presented in the *Central Blatt*, which we regret to say is no longer the case.

In 1879 there were matriculated in Prussia in the Philosophical Faculty 169 foreigners, of whom 93, or more than the half, took philosophy, philology, and history ; 50, or somewhat under a third, took mathematics and science ; farming and finance were taken by 19 ; pharmacy and dentistry by 7.

In 1880-1 at Berlin there were in the Philosophical Faculty 136 non-German students, of whom 87 were entered for philosophy, 38 for science and mathematics, 11 for political economy, pharmacy, &c.

At Leipzig the division is given still more in detail. The following studied in the Philosophical Faculty:—1, pharmacy; 16, science; 44, philosophy; 2, pädagogik; 43, philology; 6, mathematics; 23, agriculture; and 3, political economy—in all, 137. Philosophy, therefore, still appears strongly represented. At Munich, however, the two sections of the Philosophical Faculty appear about equal with 19 and 23, to which there falls to be added 1 student of pharmacy.

At the Prussian universities it is striking that Austria and England were represented far most strongly in philosophy (16 and 14), while in other departments only 8 and 6 belonged to the same faculty. Russia and America, which are strongly represented, divide their interest in both directions. Russia has 17 in philosophy, 14 in science, 8 in agriculture; America has 16 in philosophy, 18 in science, 1 in agriculture and political economy, and 3 in pharmacy. At Leipzig science appears still farther in the background in the nations mentioned. Eleven Austrians study science at that university, and ten Russians study agriculture.

It will certainly strike many that the important advances made by science in Germany, and the fame of its representatives at the German universities, do not specially appear in these numbers. Many foreigners, however, who sit at the feet of the naturalists* and physicists of the Philosophical Faculty will be entered in the Faculty of Medicine, while a larger number will not appear in the lists at all.

We must not, in conclusion, omit to glance at least shortly

* [*Naturforscher:* the distinction is not found among the Germans which we make between natural and physical science. The terms Naturwissenschaft and Naturforscher apply to science in all its branches.]

at the Germans who study abroad. We do not pretend to any complete inquiry on this point, as the possible errors involved in it are too unimportant to modify the final result; nor would minute inquiry yield us any material at once comprehensive enough and sufficiently detailed to be of use for general application. We content ourselves, therefore, with merely offering a basis for forming an opinion as to the probable numbers here involved.

The following figures give the number of Germans at the Austrian universities and their distribution :—

Year.	Germans	at Gratz.	Vienna.	Innsbruck.	Prague.	Cracow.
1863	128	—	19	80	23	6
1869	71	—	23	35	—	13
1880	179	7	53	102	9	10

For the earlier years the subdivision is not presented according to faculties. In 1880, included in the above-mentioned 179 Germans were 103 Catholic students of theology, of whom 96, the larger portion, went to Innsbruck, and some to Prague; 22 students of law, of whom 12 studied in Vienna; 33 students of medicine, of whom 26 went to Vienna; and 23 students of philosophy, of whom 15 went to Vienna. Besides these are the Germans who study at the Swiss universities. At Zürich the average number for 1880-1 was 58, of whom 23 studied medicine, 10 law, 24 philosophy, and 1 theology (besides two female students of medicine and one female student of philosophy). Basel shows 17 Germans, chiefly students of theology; Bern, 6; Dorpat, 11. Germans are also found at Utrecht, as we learn from Mayr, who gives an average of 4 for the six semesters from 1869-72—altogether about 268 Germans. They are divided as follows according to faculties:—119 are students of theology (of whom 103 are Catholics), 34 of law, 60 of medicine, 55 of philosophy.

CHAPTER VI.

THE GERMAN STUDENTS ACCORDING TO THEIR DOMICILE.

We have considered the foreigners at the German universities, and we have now to do only with native Germans, whom we shall view in two respects. We shall first determine what number of students the individual States send to the university, and compare this with the number of inhabitants. We shall thus determine where the inclination to a university life is exhibited more or less strongly, and how this has varied at different times. For the principal States we shall further examine these figures in order to estimate the supply of trained intellect in the country as compared with the demand. It then remains to set forth where the Prussians, Bavarians, Würtembergers, Saxons, &c., seek their education; in other words, we have to distribute the German students according to their domicile, and to exhibit their migratory habits.

The following table gives the results * of our inquiry for the different States of Germany.

In comparison with the population, there were at the beginning of the *sixties* far fewer Prussians at the universities

*[We have here simply recorded the results without explaining, as is done in the original in considerable detail, the method employed in reaching them. We have further reduced the table by omitting the above details for each province of Prussia separately.]

Students according to their Domicile.

State	Total.			Theol.		Theology.				Law.			Medicine.			Philosophy.		
				Ev.	Cath.	Evangelisch.		Catholic.										
	1860-1	1872-3	1881-2	1860-1		1872-3	1881-2	1872-3	1881-2	1860-1	1872-3	1881-2	1860-1	1872-3	1881-2	1860-1	1872-3	1881-2
Prussia . . .	5040	8353	13212	1797		1053	1515	475	330	805	2013	3157	921	2088	2790	1517	2725	5419
Bavaria . . .	1890	1815	2184	172	204	123	160	140	137	657	437	762	264	536	496	593	579	630
Würtemberg .	540	646	1013	129	73	128	220	75	148	—	160	314	86	85	166	196	197	161
K. of Saxony .	706	982	1491	196	2	135	230	1	—	219	353	301	155	171	261	134	320	700
Baden . . .	—	417	567	—		36	47	78	44	—	113	180	—	88	131	—	101	165
Mecklenburg .	—	318	447	—		70	75	—	—	—	104	106	—	70	66	—	75	199
Thuringia . .	—	366	568	—		80	92	—	3	—	81	116	—	60	83	—	143	274
Hesse . . .	—	345	610	—		19	54	—	1	—	92	123	—	87	140	—	147	287
Reichslande (Elsass-Lothr.)	—	104	209	—		47	32	—	1	—	9	55	—	18	42	—	30	80
With no univ.	—	698	1091	—		93	175	20	10	—	174	260	—	160	211	—	253	435
Non-Pruss. Ger.	6324	5691	8182	701		732	1090	314	349	1494	1524	2216	1076	1276	1597	2053	1845	2933
All Germany .	10364	14045	21394	2498		1784	2605	789	674	2299	3536	5373	1997	3365	4389	3570	4570	8353

Number of Students per 100,000 Inhabitants.

	1860-1	1872-3	1881-2	1860-1	1872-3	1881-2	1860-1	1872-3	1881-2	1860-1	1872-3	1881-2	1860-1	1872-3	1881-2
Prussia . . .	27·3	33·9	48·4	9·7	6·2	6·6	4·3	8·2	11·5	4·9	8·5	10·2	8·4	11·0	20·1
Non-Pruss. Ger.	36·7	34·8	45·6	4·1	6·4	8·0	14·5	9·3	12·3	6·2	7·7	8·9	11·9	11·4	16·4
All Germany .	29·0	34·2	47·3	6·9	6·2	7·2	6·5	8·6	11·9	5·6	8·4	9·7	10·0	11·0	18·5

than in the rest of Germany, 27·3 as compared with 36·7 to every 100,000 inhabitants. This proportion, however, is now completely reversed, as at present Prussia, with 48·4, stands far higher than the rest of Germany—a circumstance which is in no way to be assigned to the addition of the new provinces. Whether this increase of students is really an advantage we do not undertake to decide. Bavaria has retained its number particularly steady: at the beginning of the *forties* it showed 40·3—a number then in advance of all the other States—and at present it has made no important advance on that number. In 1835-6 we reckoned 1924 Bavarians attending the university, *i.e.*, 35 per 100,000 inhabitants; in Prussia at the same time there were 3,900 university students, or 28·2 per 100,000 inhabitants; in Saxony, 625, or 38·6; in Würtemberg, 660, or 41·4. In all Germany in the same year there were 11,471 German students, or 37 per 100,000 inhabitants. In non-Prussian Germany, accordingly, there were 7,571, or 43·8. The tables on p. 17 showed that this was by no means the highest point. At the beginning of the *thirties* there were in Germany 52·5 students per 100,000 inhabitants, and, allowing for deduction of foreigners, 51·4 German students; while in Prussia from 1825-30 there were in all 4,688 native students, or 41 per 100,000 inhabitants; in 1820-1, on the other hand, there were only 23; in 1830-1, 38, as against non-Prussian Germany with 61·5. At that time the difference between Prussia and the rest of Germany was at its highest: in the course of time it has steadily diminished.

From the work of Dieterici we are able to trace still farther back the proportion in Prussia, although the territory does not quite correspond with that of the present day. From 1797-1805 the following six universities—Erlangen,

Duisburg,* Erfurt,† Frankfurt, Halle, Königsberg—had a total average attendance of 1562 students, of whom 225 were foreigners. In a population of about 10 millions that would be only 15·6 students, and only 13·37 natives, or from 14 to 15 Prussian students per 100,000 inhabitants; so that by the beginning of the *twenties* the proportion had improved by about one-half, while up to the present time it has more than tripled.

The only State with which we can institute a comparison is Austria. We take the following numbers from the official statistics :—

Year,	1841	'51	'61	'71	'76-80 (average)	'80
Students at Austrian Universities, including unmatriculated students,	4,658	5,646	4,796	8,673	9,163	9,776
Per 100,000 inhabitants,	26	30·5	25·2	42·3	41·7	44·2

In this number, however, are included the unmatriculated students, who amount, on an average from 1876-80, to 1,681, or over 18 per cent. of the students entered; in 1863 they were 16·3 per cent. (From want of details we cannot give this distinction for earlier years.) The proportional number for 1876-80 is thus reduced to 34, which may now be compared with the above figures for Germany, as in them the unmatriculated students are likewise omitted. In the figures, further, are included the foreigners, among whom, in this instance, must be reckoned those who belong to the Transleithan territory. From 1876-80 these came to 1,674 (also above 18 per cent.), although in 1863 they were only 308, or 6·6 per cent. The ordinary native students, therefore, in Cisleithan Austria amounted from 1876-80 only to 27·88 per 100,000 inhabitants; and even with the addition of the Austrians who study abroad, the proportion is no higher than 30, and therefore smaller than in Germany.

* Had 38 students. † Had 43 students.

The inquiry into the Prussian Provinces we cannot pursue further back than the *sixties.*

In the province of Posen there were in the *sixties* only 17·4 per 100,000 inhabitants who had the will or the means to go to the university. Then followed the province of Prussia. Possibly this small number was made up for by a correspondingly high attendance at the Catholic *Lycées.* But Pomerania, with 20·6, does not show more favourably than the province of Prussia, although it has no Catholic population. The cause of the phenomenon is to be sought in the preponderance and the comparative poverty of the rural population, as the province which stands nearest to those named comes next to them also in the figures with 25·7 per cent.; while the provinces of Saxony, Rhineland, and Westphalia show 34·5, 31·5, and 35·6 respectively. It is striking, again, that in the most recent times some of those rural districts have reached, and others have considerably surpassed, those last-named, and show the largest increase in university attendance. At present Pomerania occupies the highest place with 59·1; Prussia comes next with 56·5; while Westphalia with 45·4, and the Rhineland with 33·5, are left behind, a circumstance for which the Kulturkampf is essentially to blame.

Of the new provinces, Schleswig-Holstein shows the smallest number of students. It is, on the contrary, striking that Mecklenburg, the country most closely connected with Schleswig-Holstein, sends the largest contingent to the universities, 66·1 per 100,000 inhabitants; and indeed, in all the faculties, it is surpassed by only a few States, or parts of States. The cause of this is perhaps mainly to be found in the large number of rich landowners belonging to the higher classes of society who follow the example of the provinces

of Pomerania and Prussia, and no longer train their sons to agriculture, which pays so badly.

The Reichslande* send extremely few men to the universities—at least to the German universities. They hold aloof, too, not merely from the departments of study that lead to State appointments, but also from medicine, science, &c., although a slight improvement is observable in the last ten years, the numbers being 6·7 as against 13·3.

Of students of theology, Würtemberg at present supplies 18·6 per 100,000 inhabitants; the province of Saxony, 13·1: Mecklenburg, 11·2; Pomerania, 10; the smallest numbers—apart from the Reichslande, where the proportion is 2—being in the Rhineland, 4·4, and Bavaria, 5·6, although there is no contest there between Church and State; still the *Lycées*, as we shall see, compete with the universities.

Students of law come in specially large numbers from the provinces of Prussia, Pomerania, and Mecklenburg, and chiefly from the rural districts; the proportion from each is between 15 and 16 per 100,000 inhabitants. But Würtemberg and Bavaria also have high figures—16, 14·4. The new provinces of Prussia, however, show still but small inclination to the career of the civil service—6, 7, 8·2, 8·6, although in Hesse-Nassau and Schleswig-Holstein since 1871 a distinct improvement is observable, with 2·4 and 3·4. In

* [That is, Elsass-Lothringen, the districts acquired from France after the war of 1870-71. They have an area of 5600 square miles and a population of 1½ millions. They do not form an integral part of the kingdom of Prussia, or any other German State. They are a Province of the Empire, and are governed by a Lieutenant appointed by the Emperor. Strassburg is the University of the Province. It may be taken as a measure of the importance attached to the higher education, and the direct interest taken in it by the German Government, that one of its first acts, after the acquisition of the Province, was the foundation of this University. It was founded in 1872.]

the Reichslande the proportion of students of law has gone up from 0·6 to 3·4 per 100,000 inhabitants.

For the study of medicine an extraordinary preference is shown in the last two periods by the province of Posen with 15·6; then comes Prussia, 13·1; Pomerania, 13·7; and Silesia, 12·6; while Hesse-Nassau, Rhineland, and Thuringia are far behind, with 6·1, 6·7, and 6·8 respectively.

In the philosophical faculty the greatest differences are to be observed. A considerable increase, in some instances as much as fourfold, is visible in the last two decades everywhere else but in Bavaria and Würtemberg, where the numbers have gone somewhat back—the last-named from 11·3 to 8·3 per 100,000 inhabitants. Baden, too, drags behind the other States with 10·6. In Mecklenburg 29·4 per 100,000 inhabitants are attached to the philosophical faculty; in the province of Saxony, 26·6; in the kingdom of Saxony, 24; Brandenburg, 24; Hanover, 25·5; in Rhineland and Schleswig only 12.

We must leave to others the task of ascertaining the causes of these phenomena. We do not venture a single conjecture on the subject.

CHAPTER VII.

THE MIGRATIONS OF GERMAN STUDENTS.

THE further prosecution of our inquiry brings us to the question at what universities the Prussians, Bavarians, and Saxons have chosen to study. Natives we naturally find mainly at the universities of their respective States : still to this there are very considerable exceptions. The movement to the south at the present time must be noticed as extraordinary.

Of the 12,753 Prussian students in the year 1880-1, no fewer, as we saw, than 3,073, or 24·1 per cent., attended non-Prussian universities, and in summer still more than in winter, 26 as against 22 per cent. A large number of these stay in the immediate neighbourhood, in Leipzig namely, which in summer was attended by 1,042, and in winter by 1,216 Prussians. At the six South German* universities there studied in summer 1,702, and in winter 1,609, or 13·4 and 12·6 per cent. of the entire number of Prussian

* The number of Prussians studying at the six South German universities was as follows :—

	Winter.		Summer.	
	1880-81.	1860-61.	1881.	1861.
Würzburg, ...	374	74	417	80
Munich, ...	227	22	249	32
Tübingen, ...	145	72	285	52
Freiburg, ...	140	7	350	7
Heidelberg, ...	110	111	301	148
Erlangen, ...	73	48	100	40

students. The desire to know something of the South is at present very strong in North Germany.

The interchange is not, as a rule, maintained by the South Germans, as we see from these figures. The total number of students at the Prussian universities was for the two semesters, on an average 11,135, of whom 10,768 were Germans; of these, again, 9,718 were Prussians, and only 1,050, or 9·9 per cent., were other Germans, and so not quite one-third of the number of Prussians who spread themselves over Germany outside of the narrow limits of their native State. In Saxony there are over 1000 Prussian students, but only 71 come from Saxony to Prussia, along with 37 from Bavaria, only 18 from Würtemberg, and only 10 from the Reichslande.

Most of these naturally find their way to Berlin—viz., 25 from Saxony, 21 from Bavaria, and 14 from Würtemberg. Saxon students also go to Halle and Göttingen.

The following are the numbers of Prussian students who study outside of Prussia, and the subjects studied by them:—

401	Students of Theology,	= 13·1	per cent.
	a. 310 Evangelisch,	= 10·1	per cent.
	b. 91 Catholic,	= 3·0	,,
870	Students of Law,	= 28·3	per cent.
813	,, Medicine,	= 26·4	,,
989	,, Philosophy,	= 32·2	,,

The last number comprises mainly students of philology (558) who go for the most part to Leipzig (220), and Strassburg (116), but also to Heidelberg (in summer 189, and in winter 38). It comprises, also, students of mathematics and science, who also go specially to Leipzig (100); 105 are students of forestry and political economy, who go mainly to Leipzig and Munich; 79 are students of pharmacy, who likewise find a change at Leipzig, Munich, and Jena (12).

Leipzig gets by far the majority of Prussian students. It is clearly not the beauty of Nature that attracts the mass of

the Prussians, but rather the excellence of the teaching, the advantages of the large town, and economical considerations.

In medicine, the students go mainly to Würzburg (251), far fewer to Leipzig (155), and recently to Freiburg (summer 146, winter 66). In theology (evangelisch), the students go mainly to Leipzig (177), Erlangen (53), Tübingen (summer 59, winter 24). The Catholic students go almost entirely to Würzburg (76). In law, students go chiefly to Leipzig (351), then come Tübingen (118 and 50), and Freiburg (125 and 30), while Heidelberg (67 and 47) has gone back materially compared with former years.

Owing to the change in the size of Prussia, and the increase* in the number of its universities, it is extremely difficult to make a comparison with former years. But from an examination of the lists and a comparison of the figures, we find that in the earlier periods the number of Prussians who studied outside of Prussia was far smaller than that of the non-Prussians who studied at Prussian universities. This is well known to have been the case for the *twenties* and the *thirties*, and it was adduced as a proof of the excellence and the wide-spread fame of the Prussian universities.

In the later periods this proportion, as we saw, has materially altered. In the *thirties*, only some 3·5 per cent. of the Prussian students sought their education beyond the narrow limits of their own State ; but in the *sixties* this percentage had gone up to 9·9, and at present stands at 23·8. The proportion of non-Prussians at the Prussian universities (uniformly the Old-Prussian) in 1835 was 13·5 ; in 1860, 7·0 ; 1880, 9·9 per cent. It may be questioned, however, if the change is to be attributed to any falling-off in the teaching power at these universities. It is the fine scenery, the mild climate, the geniality of South Germany, along with

* [See Appendix, note 1.]

the improved means of communication, that attracts the North Germans to the South, and sends fewer South Germans to the North. It is the desire to study at a large university, and the preference for one where living is cheap, that give Leipzig the advantage. And finally, the nomadic habit in general has been promoted by the removal of restrictions in respect of attendance at other than native universities.

A comparison of the lists and figures for the universities in Saxony, Bavaria, and Würtemberg shows that the students in these States have all more or less come under the wandering habit of the time. In Saxony

In 1835-6, 96 per cent. of the Saxon students studied at Leipzig.
,, '60-1, 91 ,, ,, ,, ,,
,, '80-1, 87 ,, ,, ,, ,,

Corresponding figures could be given for Bavaria and Würtemberg, the Würtembergers being at present the greatest wanderers next to the Prussians. The wanderers distribute themselves variously over the German universities.

It may be interesting, in conclusion, to glance at the extent to which the universities at the present day draw their numbers from their own immediate neighbourhood, and the differences to be expected to exist between them in respect of this to some extent provincial character. This will, of course, be least the case in the large universities. Still, even Berlin, in the winter semester 1880-1, shows, in 4,107 matriculated students, 1,045, or 25·4 per cent. from the province of Brandenburg, and 3,404, or 82·9 per cent., from the whole of Prussia. At Leipzig, of 3,326 students, 1,162, or 34·9 per cent., are Saxons.

At Munich,	of 1,890 students,	1,338	were Bavarians,		=70·8 p.c.
At Würzburg,	,, 921 ,,	only 390	,,	,,	=42·3 ,,
At Strassburg,	,, 745 ,,	,, 175	,,	of Els.-Loth.,	=23·5 ,,
At Heidelberg,	,, 543 ,,	206	,,	of Baden,	=37·9 ,,
At Breslau,	,, 1,281 ,,	1,259	,,	Prussian	=98·3 ,,
		879	,,	Silesians	=68·6 ,,

At Halle, 1882-3,	of 1,416	students	1,190	were Prussians,	=84·0 p.c.
			635	,, of the province of Saxony,	=44·2 ,,
At Bonn,	,, 887	,,	790	,, Prussians,	=89·0 ,,
			559	,, Rhinelanders,	=74·8 ,,
			105	,, Westphalians,	
At Königsberg,	,, 788	,,	761	,, Prussians,	=96·6 ,,
			701	,, of the province of East and West Prussia	=88·9 ,,
			604	,, East Prussia alone.	
At Tübingen,	,, 1,074	,,	824	,, of Würtemberg,	=76·7 ,,
At Rostock,	,, 200	,,	163	,, of Mecklenburg,	=81·5 ,,

The more or less local character of the universities comes strikingly out in these numbers.

CHAPTER VIII.

OCCUPATION AND SOCIAL POSITION OF THE FATHERS OF GERMAN STUDENTS.

We have thus examined the various localities from which the students come to the universities. We shall next examine the social rank and the occupation of their fathers. On this head, unfortunately, we have been able to procure but little material. In our main sources of information—the official lists—no information is given on the subject, nor, so far as we know, have any abstracts from the university archives been made or published. Extended research, however, in this direction, especially at different times, would doubtless enable us to give far deeper explanations of the causes of the fluctuations in the attendance than we have been able to deduce from the material we have collected. It would reveal the extent to which the rural population supply the universities with students, the influence of good times, of hope for the future or of the reverse feeling, the contingent supplied to the universities by the artisan class, or the extent to which the official posts are filled from the ranks of the official class. The knowledge of the proportion of those who work their way up from the lower strata of society would yield an important view of the development of the national culture; and, by comparing the students with those who go in for the examinations, and taking the extrac-

tions of the students into account, we should be able to express in figures the inferior activity of the *jeunesse dorée*. It would be of importance, further, to learn what percentage in each faculty have enjoyed the advantage of cultivated surroundings in their homes, and the number in whose case, considering the class they spring from, social culture is not to be presupposed. It would further be of interest to learn how the inclination to university life had its origin in the sons of ploughmen and artisans, and how far the educated classes need an accession—a new recruiting—from the lower ranks. Such a comparison, even in the case of gymnasial abiturients, would be important, and on the part of the Government might be easily conducted; but it would doubtless be of more importance in the case of the students when the profession has been definitely decided upon.

For the purpose before us it would be of special importance to determine whether in this respect any striking changes have taken place during recent decades. This inquiry, however requires a broader basis; if we had this it might perhaps be possible to prove that in the most recent times our students are drawn more particularly from special classes of the population, and from this it would be easy to conclude as to the cause.

We have, unfortunately, at command nothing but material of the most scanty character, and even our own inquiry in the case of Halle has only a limited value, as the preponderance of the theological element at that university prevents it from forming a typical example.

In the statistics of the university of Tübingen it is stated as the result of a similar inquiry for Würtemberg in the *twenties*, the *forties*, and the *seventies* that rather over a half (52 to 57 per cent.) of the gymnasial abiturients belonged to families the heads of which might be supposed to have re-

ceived a university education. More favourable still was the proportion among Protestant students of theology, where it amounted from 1840-9 to 64·5, and from 1873-7 to 60 per cent.; and indeed 34·5 of the fathers were themselves clergymen. Widely different was the case among the Catholic students of theology. There, of course, the last-named relationship does not exist, and the numbers were as follows:—from 1821-4, 8 per cent.; 1840-9, 3 per cent.; and 1870-7 only 2 per cent. of the fathers had received an education above the common.

The Bavarian statistics of education give for the three years 1869-72 the division of the pupils at the Latin schools and at the gymnasia according to the occupation of the fathers; but, unfortunately, sufficient notice is not taken of their social position and their educational training. Among the occupations, for example, are returned farming, manufacturing, trade and commerce, officials, &c., from which, for the purpose before us, nothing is to be gained. In an other respect, too, the figures are of no value, as the distribution of several of these occupations in the population is not known with sufficient exactness to enable us to judge how far, compared with the other classes, they furnish a larger contingent to a systematic culture. We can deduce from it nothing more than this, that the elementary schoolmasters supplied 7·5 per cent., the labourers and personal attendants only 0·9 to 1·3 per cent., and the learned class, physicians, artists with no fixed situation, 2·4 per cent. It is noteworthy, however, that nearly 40 per cent. of these scholars were sons of public officials of all sorts, while that class, according to the census of 1852, formed scarcely 3 per cent. of the population.

We have had abstracts and groupings, connected with our present question, formed for Halle, from the official lists of

the university, to determine the percentage furnished by the separate professions to each of the faculties, and the nature of the differences exhibited at the different periods. As regards these points, it is unfortunate that in the remoter periods the theological element was out of sight the preponderating one in the university, and gave it a peculiar stamp, while the medical faculty was quite in the background: at present both of these circumstances have altered. The fact, however, deserves special attention, that in the first series of years the philosophical faculty numbered scarcely any members at all, whereas at present it comprises over a third of all the students. The proportional numbers, therefore, of the entire number of students evidently cannot be compared, and much less can conclusions be formed from this instance to the rest of the universities. It is, besides, to be remarked that the returns, especially in the older periods, were not always sufficiently distinct to avoid errors. We have, therefore, for the older periods left these two faculties blank; and foreigners, of course, as well as the students of pharmacy and agriculture, we have left out of consideration.

The first period comprises the years 1768-71 with 832 students; the second, 1820-1, with 1,102; the third, 1832-6, with 1,516. It was unfortunately impossible, as we intended, to compare the years from 1828-32, the time of the highest attendance, with the beginning of the period of activity in our university life at the beginning of the *twenties*, as for those years it has accidentally been omitted to state the faculty in which the first year's students wished to be enrolled; for this period, therefore, we could only begin with 1832. With these years we compared the years 1850-4 with 1,479 students, which, as did also the years 1872-6 with 2,127, represented the ebb tide, and against this is set our sixth period 1877-81 with 2,594. They are divided,

according to the occupations of their fathers, into 16 classes.*

In the first two periods the clergy supply more of the students than any other class, 27·8 and 26 per cent.; in the last only 16 per cent., which corresponds with the general decrease of the students of theology; further, of the sons of the clergy at that time (the percentage being about equal for both periods), 80·1 per cent. studied theology, whereas at present the corresponding percentage is only 58·3. This no doubt may merely be attributable to the attachment of the clergy to their old theological school, and may not hold for the other universities. The ranks of the clergy are at present recruited in corresponding proportions from the subordinate officials and elementary teachers, who, in the earliest of our periods, supplied jointly a percentage of 13·8 and 16·5, then 26·4 and 18, 22·1, and at present 22·8. In the case of the elementary teachers this can easily be explained by the extraordinary increase in their number. In 1816 there were in Prussia of its old size, 21,766 elementary teachers; in 1846, 30,519; in 1878, 47,376, or more than twice as many as in 1816.

As compared with the clergy and subordinate officials, or elementary teachers, the higher officials in more recent times fall strikingly into the background, with 6·1 against 13·1 and 18·6 per cent. in the oldest periods, and 12·4 and 10·6 in the intermediate periods, while teachers of academical training, the learned classs, &c., uniformly sent comparatively few of their sons to the university of Halle, although in the most recent years more than formerly 5·2, as compared with 3·9 and 1·7 per cent. All the professions which require a university education furnished in the first period

* [We have omitted this minute and elaborate table. Its main results are given in the more condensed form presented on p. 64.]

53·3 per cent. of the students; in the second, 44·9 per cent.; then, 37·4, 48·7, 35·8, and 31·6; or, excluding the clerical element, 25·3, 18·9, 18·0, 19·7, 17·0, and 15·8 per cent. From what we see of Halle, therefore, there can be no room for doubt that a growing percentage of the students is recruited from those classes of society that have no university training, although this is in the main attributable to the increasing importance of the philosophical faculty, which is more largely recruited from the lower social strata. At a time, however, when the number of students has grown far faster than the population, as at present is the case, it can scarcely be otherwise; it must be that new circles participate in the training of the universities. In this view, the last figures given* are of importance, and there is, it must be said, room for wonder that the decrease in the proportion is not greater. Last century the university was in a far higher degree than at present a preserve of the official world. Including the clergy, more than half the students came from these classes; at present they do not supply a third. Exclusive of the clergy, they formerly supplied a fourth, and now not quite a seventh of the students.

People in the higher walks of business send more students to the universities at present than formerly. Tradesmen, innkeepers (among whom the retail dealers and smaller publicans are, unfortunately, not sufficiently distinguished in the lists), landed proprietors, and manufacturers were the fathers of 12·5, 13·4, and 16·5, 13·8, 20·4 per cent. of the students, among whom the artisan class is represented in considerably smaller proportion than a hundred years ago.

* [Representing the class of labourers; in 1820-2 these formed 0·5 per cent. of all the occupations represented at the university of Halle; in 1877-81 their percentage was 0·3.]

In looking at these figures, it must of course be borne in mind that in the first period we could note of the industrial classes none at all, and in the second only a very few. There were scarcely any large manufacturing establishments, and a number of those workmen would then doubtless do the work, and hold much the social position of the retail tradesmen (Fabrikanten) of the present day. A hundred years ago the peasantry supplied 3·9 ; sixty years ago, 6·6 ; and at present 6·9 per cent. of the students. Apart from this last fact, the *twenties* seem to have stood far nearer to the last century than we do in the present day. Between the separate faculties an essential difference is observable. In theology, more than a third of the students followed their fathers' profession—the same result as we saw was obtained for Tübingen ; but of course this was formerly more common than at present.

In the table on the following page we give the results for the different periods in condensed form. In the medical faculty the number of matriculated students in the first periods was, unfortunately, so small that the estimated percentages cannot serve as a standard for comparison. We leave them accordingly wholly out of account.

The percentage of the three first faculties is almost equal, only the philosophical faculty shows a strikingly low percentage, which has been somewhat raised in the last periods.

What we observed above in the collective figures comes out here also in the separate faculties. The subordinate officials and elementary teachers show always the same desire to send their sons to the university, supported by their increasing number. These classes supply more students to theology and philosophy than to the other faculties. The sons of elementary teachers in particular went almost bodily

Occupation and Social Position of the Fathers of Students at Halle.

Year.	Professions requiring a University education.				Lower officials and elementary schoolmasters.				Merchants, manufacturers, hotel-keepers, landed proprietors, officers, apothecaries, fundholders.				Artisans and peasants.				Inferior servants and labourers.			
	Theol.	Law.	Medicine.	Phil.	Theol.	Law.	Medicine.	Phil.	Theol.	Law.	Medicine.	Phil.	Theol.	Law.	Medicine.	Phil.	Theol.	Law.	Medicine.	Phil.
1768-71	51·3*	56·6	—	—	16·0	10·7	—	—	7·8	25·1	—	—	23·6	7·3	—	—	1·3	0·3	—	—
1820-22	43·7	48·6	—	—	19·3	11·3	—	—	9·9	27·8	—	—	26·2	11·2	—	—	0·9	1·1	—	—
1832-36	34·6	45·2	41·8	23·6	22·9	20·3	14·7	28·0	16·0	21·3	31·3	18·3	24·1	11·6	12·1	29·0	2·4	1·6	—	1·8
1850-54	44·0	37·6	34·4	29·7	28·1	14·4	16·7	26·8	11·9	38·6	32·8	23·8	14·6	9·1	15·8	17·9	1·4	0·3	0·3	4·5
1872-76	49·6	49·2	44·5	32·4	24·2	11·0	12·5	28·6	9·9	28·6	30·5	18·1	14·7	10·6	12·5	20·9	1·6	0·6	—	—
1877-81	38·2	34·6	35·0	24·3	26·9	17·2	18·2	24·4	13·8	39·9	32·8	26·6	20·0	8·0	13·6	23·8	1·1	0·3	0·4	0·9

* [The figures give the proportion of the separate faculties formed by students whose fathers belonged to the respective occupations. Thus, in the period 1768-71, 51·3 per cent. of all the students of theology in the University of Halle were sons of persons who belonged to one or other of the professions requiring a university education.]

in former times to theology—over 90 per cent.; more recently, however, only 46 per cent. In the case of the subordinate officials, more than 40 per cent. were students of theology, but now only 23 per cent. of the students of this class study that subject.

The remainder of the sons of the subordinate officials went almost exclusively to law (of the teachers only small percentages are left after theology is supplied). Lately only 17·3 per cent. have gone to law; there still remain 12·9 for medicine and 47·5 for philosophy, which here also has now taken the position formerly occupied by theology. Merchants, too, manufacturers, and landed proprietors at present furnish proportionally more students than formerly; and these bring with them as a rule more money and more social polish than the sons of pastors, teachers, physicians, judges, &c. It will no doubt be regarded as only natural and highly desirable that the sons of men who have grown rich in business should not follow the example of their fathers, and devote their lives also merely to the acquisition of money. They may be expected rather to aim at a position in life which generally gives social rank and a certain influence, but in which it is scarcely possible to make a fortune —nay, where in most cases it is only by means of an inherited fortune that a family can be maintained free from pecuniary cares. Theology is least preferred by those classes, although latterly rather more than before. It is but few sons of landed proprietors that will be found among the clergy; more, as is well known, take to the legal profession, although that was much more common in the olden days than at present, when a considerable number take to medicine (22 per cent.) and to the philosophical faculty (20·5 per cent.) It is, however, very significant that under the last head we have not found a single one taking to

philology or philosophy, but only to science, political economy, &c. The trading classes supply at present almost the half of the philosophical faculty, and of these over a third study science.

Peasants' sons take even more exclusively to theology than those of artisans, of whom a considerable part study law. Both of these classes are very strongly represented in the theological, and recently in the philosophical faculty, less so in the medical faculty.

It is no doubt very important that these classes and occupations should be represented in our academical life. It is from them that the educated classes have to recruit and to reinvigorate their frequently diminished physical force. A general set of statistics with large numbers would doubtless yield considerable fluctuations. These will largely correspond to the circumstances of the time by which the ebb and the flow of the separate faculties are influenced. In our figures one is rather struck by the steady uniformity, and by the small degree in which peasants' sons go to the university. In theology in particular they form only 8 per cent. of the students in that faculty. The artisan class in the latest decades is withdrawing more from theology; they appear to find that trade has more gold in it than a parish.

From the lowest class only a very few appear, according to our figures, to work their way up to a university education. It is quite an exception when one does so. They did not supply 1 per cent. to the university; but it is noteworthy that a hundred years ago, and sixty years ago, they supplied the same number as now.

Let us take another glance at the professions and occupations in question separately. In this particular it is possible with our figures to institute only a very limited comparison

with the early periods, as our university at that time had properly only two faculties.

We have already seen that the sons of clergymen have a preference for the profession of their fathers. That will in general be more or less the case. The sons of the higher officials studied law at the following percentages:—81·8, 64·5, 55·3, 71·4, 53·1, and 44·3. It is significant that in the most recent years, when there is a distinct crowding in the legal profession, the higher officials decidedly prefer to send their sons to other branches of study, as was formerly the case in the *fifties*. The sons of physicians go to medicine at the following rates:—51·9, 56·7, 79·6, 32·7, 46·9, and 50·8 per cent.; the sons of the higher class teachers contribute at present 50·8 per cent. to the philosophical faculty. In further prosecuting these relationships, we confine ourselves only to the most recent time, as the unequal distribution of the faculties easily permits the attainment of false results. The higher officials send their sons —the faculty of law apart—more especially to the philosophical faculty, with 32·3 per cent.; to the medical, 17·1 per cent.; and only 6·3 to the theological. Of the sons of the higher-school masters we see 20·4 at law, 14·9 at medicine, and 13·4 at theology. The teachers without a university education, on the other hand, send their sons—to theology, 46·0; to philosophy, 33·6; to medicine, 13·9, and to law, only 6·5 per cent. The study of law is unquestionably the most costly, as even after the university course is finished the study must be prosecuted for several years without receipt of income. Medicine, too, requires many years when no fees come in, and the student, besides, has but small chance of gaining anything while attending the university. It is different with the students of theology and philosophy; in the case of the latter a three years'

course is sufficient in order to present themselves for examination; and although this examination often requires an extra year, the students of philosophy, like those of theology hitherto, can count not only upon immediately receiving an appointment with an income attached to it, but during their whole university course also they have far more copious support to look to from bursaries of all kinds; they have, besides, opportunities of making a little by private teaching. It is no wonder, then, if the less-moneyed classes confine themselves mainly to the two latter faculties. The position and work of pastors and teachers in these days are not generally held in such high esteem as to attract many rich people to choose these professions; indeed, only special interest in the subject, or rather an exceptional love for the work, would attract the sons of well-to-do parents to that branch of study. It must further be remembered that the philosophical faculty forms the path to the various professions, and, indeed, to several branches of business. More, besides, are matriculated in this faculty who are only in search of a general, all-round culture at the university, and not of any professional knowledge. It is on this account that a number of wealthy students are found entered in this faculty.

The study of medicine is prosecuted from love of the subject, and less than others from subordinate motives. It is to be assumed, therefore, that all classes will be represented in this study. As the profession, however, demands energy and laborious exertions, the less robust elements of society are deterred from entering it; and, as these are specially found among those who are luxuriously brought up, the very wealthy are not represented in this faculty, as neither, for the reasons given above, are the very poor.

The legal faculty offers the best prospects to the ambitious and to the higher classes of society; the less-moneyed

classes are repelled from it by barriers which comparatively few are, without special favouring circumstances, able to surmount. Our material offers us but a limited and insufficient basis for judging whether the circumstances of the students were favourable or only moderate, and we are accordingly not in a position to set forth the whole subject in figures. Nothing but a thorough investigation of the credits * allowed to students could shed any more light on the subject, and yet, even for a single university for which alone we could procure it, our material is insufficient. Merely scanty facts are to be gleaned with more or less certainty from a number of the headings. Our categories of merchants, among whom are included many needy small tradesmen, of higher officials, even of fundholders, give but an imperfect description of circumstances. Perhaps those who best answer to their description are the manufacturers and landed proprietors, although from vanity the son of many a mere ploughman may have slipped into the latter class. The subordinate officials, the inferior teachers and attendants, and labourers are no doubt to be regarded as the un-moneyed classes; but in our province (Saxony) the peasant and even the artisan are not, simply as such, to be so regarded.

The four un-moneyed classes just mentioned comprise in the last period 613, of whom there studied theology and philosophy 456, or 74·4 per cent.; medicine, 81, or 13·2 per cent.; and law, 76, or 12·4 per cent. The number of law students is to be regarded as relatively high. The sons of the 351 landed proprietors, fundholders, and manufacturers, on the other hand, were distributed as follows :—

* [Students, especially sons of clergymen and public officials, who are unable to pay their fees when they enter the university, can still attend the classes if they promise to pay the fees within six years after obtaining an appointment.]

The percentage at law was 29·7; at medicine, 9·5; at theology, 12·9; at philosophy, 38·4, of whom the majority were studying science. The landed proprietors alone contribute only a third to the law faculty, and were considerably surpassed, as we saw, by the State officials with 44·3 per cent. The peasant and artisan classes, which show very similar percentages, hold aloof from the study of law far more than the inferior officials do (*circa* 7·5 per cent.); to medicine they are about equally inclined, the artisans yielding 11·4 and the peasants 14 per cent. Naturally, also, they take to the cheaper branches of study. The artisans contribute to philosophy 52·9 per cent, and to theology 29·3 per cent. The peasants prefer theology, with 33 per cent.

To repeat, as the final result of our inquiry from the material before us, which, no doubt, can support only a limited conclusion, it appears that for the more recent period the large accessions to our universities have been from the lower classes. It may on the whole be said to be the custom for people who have had a university education themselves to give their sons in turn such an education; and when an increase in the attendance at the universities takes place, it is to be attributed to a recruiting from the lower classes, and in this recruiting the subordinate officials, elementary teachers, &c., supply the main contingent. It would be desirable to get at the facts on this point for all the universities (and we reserve such an investigation for some future time); but we scarcely think that the figures for the other universities would yield a different result. The differences between the different periods are not so considerable as would be supposed, and so far as special conclusions can be drawn from them, we shall consider them by and by.

We shall now take a nearer view of the separate faculties.

CHAPTER IX.

THE SEPARATE FACULTIES.

As the following short table shows, the separate faculties have in the course of time formed a very different percentage of the universities :—

PERCENTAGE OF THE FACULTIES OF ALL THE GERMAN UNIVERSITIES.

		Law.	Medicine.	Evan. Theol.	Cath. Theol.	Philos.
1830-1	100	28·3	15·8	26·8	11·4	17·7
'31-6	100	28·2	19·8	23·9	9·9	18·2
'36-41	100	28·2	19·9	20·1	8·1	23·7
'41-6	100	29·7	16·8	18·3	8·6	26·6
'46-51	100	33·6	15·2	15·9	10·5	25·7
'51-6	100	33·8	18·6	14·2	10·2	23·2
'56-61	100	23·1	17·8	19·6	10·0	29·5
'61-6	100	21·5	18·2	18·3	8·5	33·5
'66-71	100	22·1	20·9	15·9	7·1	34·0
'71-6	100	25·5	21·7	11·0	5·1	36·7
'76-81	100	26·0	19·1	10·0	3·4	41·5
'81-2	100	22·6	21·5	12·5	3·1	40·3

Fluctuation is here specially observable in the medical faculty, which has averaged at all the German universities from 15·2 to 21·5 per cent., and has frequently gone up and down between these numbers. At the Prussian universities the percentage went down even as low as 11·6 per cent. and rose slowly to over 21 per cent., although it never reached a full fourth of the students. Greater regularity is observable in the faculty of law : it runs up from 28·3 per cent. at the beginning of our

period to 33·8 in the decade following the middle of the *forties*, to fall again to from 21·5 to 26 per cent., continuing, if anything, nearer the lower of these figures. Thus, after contributing for a short time a third of all the students, it now contributes permanently about a fourth. At the Prussian universities the fluctuations are greater, from 15·7 per cent. in the first half of the *sixties* to 31·4 in the decade following the middle of the *forties*; on an average, however, the law faculty forms there one fourth of the total number of students. Quite the reverse is the case in the other two faculties. In theology (Evangelisch * and Catholic) the students in the first period came to more than a third, then went steadily down to 13·4 (in Prussia even to 11·8 per cent.), to recover again a very little in the last semesters. If the theological faculty has in course of time lost in importance, the philosophical has correspondingly gained. We see it begin with 17·7 per cent., to run up to 41·5, in Prussia even to 45·6 per cent., although the last semesters show a slight abatement in the numbers. A closer view of the subject will be gained when we consider each of the faculties separately.

To offer a basis for comparison we give the figures for Austria; these give the total number of students, including the un-matriculated :—

	1841	1851	1861	1871	1876	1876-80	1880-81
Theology, .	889	753	656	1,129	614	901	1,091
Law, . .	2,332	2,544	2,451	3,208	3,768	4,475	4,778
Medicine, .	1,290	1,592	887	1,608	1,608	1,779	2,057
Philosophy,	147	757	802	2,129	2,129	2,068	1,851
Total, .	4,658	5,646	4,796	8,673	8,119	9,174	9,777

* [A term of wide acceptation in the official language of Prussia. It includes Lutherans, Calvinists, and the United Lutherans and Calvinists, Baptists, Independents, &c.—in short, all Protestant Christians. Although common to all these sects, the term is far from undogmatic. It may be regarded as expressing the positive side of the creed, the term Protestant expressing its negative side in relation to Rome. In this translation Evangelisch is used as interchangeable with Protestant.]

PERCENTAGE OF THE FACULTIES.

Theology, .	19·1 %	13·3 %	13·6 %	13·0 %	7·6 %	9·7 %	11·2 %
Law, . .	50·0 ,,	45·1 ,,	51·1 ,,	37·0 ,,	46·4 ,,	48·7 ,,	48·9 ,,
Medicine, .	27·7 ,,	28·2 ,,	18·4 ,,	29·9 ,,	19·8 ,,	19·3 ,,	21·0 ,,
Philosophy,	3·2 ,,	13·4 ,,	16·9 ,,	20·1 ,,	26·2 ,,	22·3 ,,	18·9 ,,

From these figures it may be gathered how late was the development of the philosophical faculty in Austria compared with Germany, and how far at present it is from having the same importance. The falling off in the philosophical faculty is also striking after its steady growth up to 1876. In the position of the faculty of law, further, we observe a decided difference. At the earlier dates that faculty enjoyed among our neighbours a notable preponderance; it went back at the beginning of the *seventies*, but soon reached its earlier dimensions. Nearly the full half of all the students in Austria are students of law; with us they form a fourth, and even that must be regarded as too high. In Austria the relative number of theological students also has gone down compared with former times. At the beginning of the *seventies* the proportion was extremely unfavourable, although lately it has somewhat improved. In medicine there are considerable fluctuations, which we shall find an opportunity of explaining later on.

THE FACULTY OF THEOLOGY.—A. PROTESTANT.

There can be no doubt that in the whole of our university life the theological faculty—Catholic and Protestant alike—has experienced the greatest fluctuations. In no other has the flood-tide been so considerable that the overflow became proportionally alarming, and in none did the diminution assume proportions so colossal that the want of accessions

was regarded as a real calamity. The causes of the deplorable phenomenon were discussed at public meetings, by the State authorities, and in a special literature; although in the Protestant faculty the difficulty seems for the present to be again obviated. Taking the highest and lowest figures, we find the following numbers of students of theology in Germany:—

Protestant.	Catholic.
1831 : 4,147	1831 : 1,801
1851 : 1,631	1840 : 866
1860 : 2,520	1850 : 1,393
1876 : 1,539	1860 : 1,209
1882-3 : 3,168	1880 : 619

In Prussia we can go ten years farther back. The extremes here are:—

PROTESTANT STUDENTS OF THEOLOGY.

	1820	'30	'37	'51	'61	'76	'82	'82-3
Native Prussians,	741	1,791	993	578	1,060	439	1,113	...
Total, ...	853	2,203	1,187	717	1,167	488	1,291	1,334

Taking larger averages, it appears that the number of Protestant students of theology from 1831-40 (2,879) was on an average considerably more than from 1871-80 (1,794); even the last year, in spite of the important advance compared with the previous years, only surpassed but little the highest point of that large average, being 3,097 in the summer semester of 1882.

The following table shows the total number of Protestant students of theology in Germany, the proportion that number bears to the numbers for 1831-6, and the distribution of the students:—

Protestant Students of Theology.

Year.	In all Germany.	Proportion to '31-6.	Berlin.	Breslau.	Halle.	Greifswald.	Königsberg.	Bonn.	Göttingen.	Marburg.	Kiel.	Erlangen.	Tübingen.	Heidelberg.	Leipzig.	Jena.	Giessen.	Rostock.	Strassburg.
1831-6	3,105	100	533	211	505	90	169	104	224	92	102	140	176	46	402	228	72	15	—
'36-41	2,308	74·3	409	133	380	36	125	84	177	73	72	139	149	18	283	160	68	15	—
'41-6	2,117	68·2	317	89	435	33	75	69	154	72	63	162	164	35	231	110	83	25	—
'46-51	1,798	57·9	197	63	366	27	49	47	137	76	37	179	159	50	214	98	76	25	—
'51-6	1,751	56·4	203	53	368	27	61	60	122	66	26	214	143	71	169	90	50	27	—
'56-61	2,353	75·8	316	96	471	31	122	60	160	80	32	302	185	93	225	118	51	32	—
'61-6	2,423	78·0	386	100	391	25	110	61	145	90	48	276	225	93	261	135	50	41	—
'66-71	2,154	69·4	324	67	318	25	80	56	141	76	55	191	253	57	347	101	20	43	—
'71-6	1,780	57·3	179	46	220	27	59	53	95	49	51	155	259	19	384	83	15	34	52
'76-81	1,961	63·1	191	70	248	51	59	65	112	63	44	170	268	24	407	73	26	38	52
'81-4	3,322	107·0	454	120	462	122	144	91	180	113	60	298	327	44	618	109	61	45	75
'83-4	3,614	116·4	530	135	533	144	164	89	175	110	46	363	307	42	669	118	71	43	85

The bound upwards of the most recent years is a quite striking one, as in the winter semester 1876-7 there were still only 1,539 students. In eleven semesters, consequently, the numbers have been almost doubled.* We must go back to the year 1834 before we meet with a number equal to that of 1882, while in our whole period we do not meet with so low a number as in the middle of the *seventies*. The extremes almost touch each other. It is as if our youth had been suddenly shocked at the portentous deficiency, and at a single bound attempted to make it up.

Comparing the averages for the last half of the *twenties* with those of the first half of the *thirties*, we find the falling off to be in the proportion of 100 : 78, and between the latter and the end of the *forties* as 100 : 73. The proportion for the whole of Germany is about the same, 100 : 74. Comparing the first half of the *thirties* with the first half of the *seventies*, we find the proportion for all Germany to be 100 : 57 and in the Old-Prussian universities 100 : 36, much lower than for the whole empire. The study of theology, therefore, has gone back much more in the Prussian universities than in the rest ; and comparing the native students in the seven Old-Prussian faculties with the Old-Prussian students of theology in Germany, the proportion is 100 : 48 —a proportion which will be but little modified by the addition to the Old-Prussian of the New-Prussian universities. It is the South-German universities which make up for this deficiency ; they show no decrease, but an increase —from 368 to 433—which is felt especially in Tübingen, where in the same periods the numbers were 176 and 259, the decrease consequently being very considerable during the time of the general decrease elsewhere. During the same period, again, Halle has experienced perceptible losses.

* [In 1881-2 the number of Protestant theological students was 2947.]

In the first half of the *thirties*, with 505 theological students, it was surpassed only a little by Berlin (533); it surpassed Leipzig (402), and left all its other sisters far behind; but in the second half of the *thirties* it was beaten, not, indeed, by Berlin (179), but by Leipzig (384) and by Tübingen, which had then taken the lead. At two points Halle had the largest attendance—1841-6 with 435 students and 1856-61 with 471. In the most recent period Leipzig is far ahead with 562, Berlin has 380, Halle 379, while Tübingen is behind with 336. On the whole, it must be said that the tendency to flock to large centres is not so strong among the students of theology as among those of law; only the students of medicine, for obvious reasons, distribute themselves comparatively evenly over the universities.

The number of foreigners who attend the theological faculty of the German universities is comparatively small. In Prussia for the ten semesters 1871-6 we note only 44, and at the other universities, excluding Strassburg, 90—total, excluding Strassburg, 134.* In the following period, down to 1881, the numbers rather went back—to 31 and 58, and in the most recent semesters to 29 and 48.

In the latest semesters only sixteen Protestant theological students, as we saw, studied abroad, of whom the majority went to Basel. In our further inquiry these numbers may be left out of account without fear of thereby causing serious error.

Our next comparison is that between population and the number of students. A deeper view, however, will here be gained if the confessions are distinguished and the Protestant theological students compared with the Protestant population. The religious connexion of the people, unfortunately, has not been specially noticed in all the census

* [This number, we suppose, is to be taken with the limitation mentioned above on page 39.]

that have been made, nor uniformly in all parts of Germany. The first general and uniform inquiry and collection of such statistics for all Germany is that of 1871, and the last that of 1880. In 1871, out of every 10,000 inhabitants, there were 6,231 Protestants and 3,621 Catholics; and in 1880, 6,260 Protestants and 3,588 Catholics. By the statistics of population for the separate German States for the year 1858, the population was 6,370 : 3,570. This is a little more favourable for the Protestant side, as Elsass-Lothringen was wanting, in which the Catholic population preponderates. For the Old-Prussian provinces more exact figures can be got farther back:—

	1837	'43	'58	'71	'80
Protestants,	6,103	6,094	6,123	6,067	6,049
Catholics,	3,755	3,762	3,731	3,775	3,774

For the earlier periods the result for Germany, as for Prussia, is the same, as showing a change to the disadvantage of the Protestants. Over all Germany it is only in the last decade that an increase in the Protestant population has taken place.* But the change is so small that we may reckon on coming near enough to the real state of the case by assuming the proportion for the *thirties* at 6,390 : 3,550 ; for the *forties*, 6,370 : 3,570 ; for the *sixties*, 6,300 : 3,600, &c. These proportions will yield sufficient exactness to enable us to proceed with our calculations, while even more serious alterations will not be able to modify the final result of our inquiry. We shall, at all events, come nearer the truth by the division into the confessions than if we confined ourselves simply to population. Comparing the Protestant population of Germany with the Protestant students of theology, we obtain the following proportions :—

* [This is said to have been the result of a shifting of population and emigration, rather than of accessions to the Protestant from the Catholic confession.]

Year.	Protestant Population.	Protestant Students of Theology for every 100,000 Protestants.
'31-36	19,597,754	15·6
'36-41	20,698,527	10·9
'41 46	21,723,527	9·6
'46-51	22,447,568	7·8
'51-56	22,935,254	7·5
'56-61	23,842,573	9·6
'61-66	24,722,489	9·5
'66-71	25,586,672	8·2
'71-76	26,387,640	6·6
'76-81	27,872,958	6·7
'81-82	28,318,592	10·4

There were thus in all Germany at the beginning of the *thirties* about 15·6 Protestant theological students for every 100,000 Protestants, and at the end of the *seventies*, only 6·7. Taking Prussia by itself, the difference was still more striking. In the first period the proportion was 19·3 per 100,000; in the first half of the *seventies* it was as low as 4·6; by the end of the *seventies* it was 5·1; in 1881-2 it went up to 8·6; and in all Germany as high as 10·48. In 1882-3 the proportions were about 9·8 and 11·1, so that for Germany the proportion of the end of the *thirties* is again restored.

To judge rightly of this whole development, we must bear in mind the change that has in course of time taken place on the position of the theological faculty at the university; but in order to give a clear conception of this change, we are obliged at this point to anticipate a little in our inquiry. Last century the theological faculty was unquestionably the

premier faculty, not only by precedence, but also by reason of the number and the higher salaries of its professors. It was reckoned a special honour to belong to this faculty, and even those who had no intention of working a parish, but wished to devote themselves specially to philosophy and philology, at first entered the theological faculty, or were never connected with any other. From this faculty proceeded the great majority of teachers. So far, indeed, did this tendency go, that last century at Halle, notwithstanding the famous names who represented the philosophical faculty—we name only Chr. Wolf—a list of the philosophical faculty did not exist at all, but all who were studying philology, and even mathematics, were entered in the lists of the theological faculty; the division of the students, in fact, was only into three faculties. This tradition seems to have still obtained in the first decade of the present century. Even in the *twenties* there is no doubt that of the large number of students entered in the theological faculty, a very considerable proportion never after entered upon any ecclesiastical office at all; those, moreover, who entered the university only with the intention of becoming teachers entered themselves in the theological faculty and attended theological prelections. Almost all our great names in philosophy of last century and the beginning of the present were originally, it should be remembered, theological students. All this has been changed during the last five decades to the disadvantage of theology. For the office of teacher the study of theology is no longer an essential; all that the teacher now requires is a purely philological training. This far-reaching change came about not suddenly but, as was natural, quite gradually in the different German States at different times, and in the north earlier than in the south. Indeed, in Würtemberg it is not before the *fifties* and *sixties* we notice it, and even at the present

day a large number of the teachers and directors of the gymnasia in that State have proceeded wholly from the theological faculty.

There is no denying the fact, deplore it as we may, that the students no longer regard it as an advantage to belong to the theological faculty. No one now enters that faculty unless with the intention of becoming a clergyman or for the study of theology. From this cause alone the number of theological students was bound to go down in the course of the fifty years, and that of the members of the philosophical faculty to increase. To account for the phenomenon it is not necessary to assume any change in the inclination of our youth to the profession in question, nor to argue from the diminution in the number of students of theology at the university to a want or a corresponding diminution in the number of clergymen. Still, such a want of candidates for the clerical office was undoubtedly felt at the beginning of the *seventies.*

Ernesti, in his excellent work* on this subject, comes to the conclusion that in 1875 no such want as that above referred to existed in the following parts of Germany:—Saxony, Würtemberg, Baden, in the consistorial circles† of Kiel, Wiesbaden, Kassel, Birkenfeld, Reuss ä. L., and Schwartzburg-Sondershausen. The author gives the following proofs. The Royal examining commission‡ of students of theology at Leipzig admitted the following as probationers:—

1834-43.	'44-53.	'57-63.	'64-73.
582	333	334	448

And while from 1863-74 there were 372 vacancies, there were 448 licentiates to supply them. The supply was thus abundantly equal to the demand, and in the *thirties* there

* Über die Abnahme der Theologie-Studierenden. Stuttgart, 1875.
† [See Appendix, Note 3.] ‡ [See Appendix, Note 4.]

must have existed a considerable over-supply. Since 1873 the study of theology has increased no less in Saxony than in all Germany. In Würtemberg a deficiency is noticed for the *twenties*, but this is followed by an embarrassing superabundance in the *thirties, forties*, and even the early *fifties*, so that the synod resolved in 1854 to reduce the number of admissions into the seminary. In the *sixties* a right proportion had been reached, but the self-supporting students no longer appeared in the same numbers as formerly.

In Baden no diminution in the number of applicants took place. The average number of those registered yearly was—

1830-9	'40-9	'50-9	'60-73
12·6	9·8	14·5	14·8

Still, a want of probationers has lately been felt to supply the recently erected and also the old posts.

To the States in which a decrease in the supply is observed, although no felt want has yet been announced, belong Brunswick, Mecklenburg-Schwerin, Mecklenburg-Strelitz, S. Altenburg, Anhalt, Reuss j. L, and Lübeck. In a bad way, according to Ernesti, are the eight Old-Prussian provinces, Hanover, Bavaria, S.-Weimar, S.-Meiningen, Oldenburg, Schwartzburg-Rudolstadt, Waldeck, Lippe-Detmold.

In Bavaria, from 1861-71, for an average of 24·4 vacant posts yearly there were only 23 candidates and therefore 1 too few. From 1869-72 there were at Erlangen on an average 97 Bavarian Protestant students of theology, and 33 studying outside of Bavaria—in all 130. In the year 1880-1 among 201 theological students 98 were Bavarians, and there were 39 studying beyond Bavaria—in all 137. The increase up to this point was not sufficient.

We need no apology for giving special attention to Prussia in this connexion, as we have material for carrying our researches farther back for this State than for the rest of

Germany, and the number of students can be compared with candidates and preachers, a thing which cannot be done in the other States.

The attendance of students of theology at the Old-Prussian universities can be ascertained as far back as 1820, but it would give a false result were we to take the mere number in attendance at these universities as corresponding exactly with the number of theological students in the Old-Prussian provinces. Foreign students formerly came in large numbers to these universities to study theology, and at present more Prussians than formerly go out of the country for that purpose; the native students, therefore, must be considered separately, and besides, to the native students at Prussian universities we must add the Prussian students at other universities. As already said, this information cannot be got with sufficient exactness for the earlier period, still the number of Prussian theological students at non-Prussian universities seems to have been very small. In 1835-6 at Heidelberg and Tübingen there were not more than one or two Prussian students; at Leipzig there were 16; (for Erlangen there are no returns); and these are the principal universities that seem to have had any special attractions for Prussians. For the following period, 1851-73, the numbers are given fully detailed in the General Educational Statistics for the year 1874, and, in consequence of a resolution of the German Protestant Church Conference at Eisenach in 1872, an official return was made of the number of Protestant students of theology belonging to the 8 Old-Prussian provinces who were studying at German universities in each semester from 1851-74. This, indeed, is not given minutely for each university, but it is sufficiently accurate for our purpose.

In the following table we give the number of Old-Prussian students of theology from 1821-81 :—

'21-6 - 1,107	'41-6 - 782	'61-6 - 1,065
'26-31 - 1,645	'46-51 - 619	'66-71 - 850
'31-6 - 1,360	'51-6 - 693	'71-6 - 776
'36-41 - 667	'56-61 - 1,081	'76-81 - 1,302

The figures, while showing the fluctuations in the attendance to which we referred above, show further the steady increase in the percentage of Prussians who go beyond the confines of their own State for their theological education. In the first half of the *fifties* that proportion was close on 5 per cent.; it increased steadily to over 11 per cent. in the latter half of the *sixties*, and then bounded up to 20 per cent. in the beginning of the *seventies*, and at that figure it has with small variations remained.

Having thus ascertained the number of students of theology in the Old-Prussian provinces from 1820-81, we have now to consider the relation of this supply to the wants of the country. For this purpose we require to determine three points:—The percentage of students who do not come up to the examination at all; the number who fail to pass the examination; the number who pass the examination but who never succeed in getting a post. Death, sickness, incapacity for the work, change of inclination and consequent abandonment of the study, at least with a view to the clerical profession, are to be regarded as the causes of leaving the university. The last cause clearly will tell very differently at different times; and generally, the greater the pressure on the vacant posts, and consequently the longer the space of time between the periods of study and the receiving of a fixed appointment, the greater will be the loss to be expected, the natural waste by death and sickness will increase absolutely, and, in the wretched endowment of the parishes, more vigorous attempts are made to get more speedily into a

competency by adopting the teaching profession, or by emigration.

For Prussia the figures connected with the subject exist in ample fulness.

In the following six periods of five years the proportion of students to the number who attained the position of licentiates, and who were ordained, was as follows :—

Year.	Old-Prussian Students.	Licensed.		Ordained.	
		Total.	Percentage of Students.	Total.	Percentage of Students.
1851-56	693	137	20	196	28
1856-61	1081	193	18	170	16
1861-66	1065	232	22	198	19
1866-71	865	223	26	231	27
1871-76	658	176	27	186	28
1876-81	776	146	19	157	20

On the average of the whole period there are 184 licentiates for 856 students. Assuming three years as the length of the course, of the 856 students 285 should each year go up for examination; and supposing this as the number that should pass and take license, the difference amounts to 101, or 35 per cent. Many, however, take a longer course. Since 1872 especially the students of theology are not more favourably situated as regards the one-year's military service than the rest of the students, and so the average length of the course must be assumed to be about a quarter of a year longer, which reduces the difference to about 28 per cent. In the first decade the loss was greater than later on, the licentiates forming only 18·6 per cent. of the students, and in the two following decades 23·5 and 22·4 per cent. For Prussia it may be asserted generally that, of the average number of students, 21·5 per cent.

annually become licentiates, whereas, if there were no loss, the percentage ought to be about 30.

On the whole, the licentiates show the same fluctuations as the students; naturally, however, the elevations and the depressions are somewhat later in showing themselves. The number of licentiates at the beginning of the *fifties* was very small; it ran up considerably in the two following periods, to go down again in the *seventies* to its former proportion. An estimate has been made for Hanover and Bavaria of the number of probationers as far back as to 1820. This we append below.* In both countries in the *twenties* the figures are very high. In Hanover they remain so for the *thirties;* and at the beginning of the *seventies* an improvement was visible there, of which in the other States there was then no trace.

Many of the youth who succeed in gaining a title to an appointment fail notwithstanding in getting one. In Baden, according to Ernesti, from 1860-73 215 probationers were registered; of these, 43, or 20 per cent., never received any ecclesiastical appointment; 4·2 per cent. were prevented by sickness or death, 7·9 per cent. took to teaching, and 7·9 per cent. removed to other States in Germany, or left Germany altogether. It is, on the contrary, very striking that in Prussia, during the thirty years from 1851-81, the number of ordained persons—*i.e.*, of persons appointed to a benefice, is greater than the number of licentiates. On an average for that whole period there were 190 ordained for 185 licensed. This disproportion no doubt becomes rectified when it is considered that in the first period the number of

* The average number of candidates examined yearly was—

	1820-9	'30-9	'40-9	'50-9	'60-9	'70-9
In Hanover,	53·8	57·3	30·1	27·4	34·3	36·2
In Bavaria,	47·6	33·6	31·4	29·0	24·2	

probationers was still very small (137), and individuals from the old residuum were still eligible for appointment. If, however, we change the numbers and compare the probationers of 1851-76 with the persons ordained from 1856-81, the former are only in a majority of six, and in the last fifteen years there were ten more appointments made yearly than there came forward men entitled to the posts.

It is to be observed that a large number of those who have become licentiates hold situations as teachers, rectors, &c., and in these situations they marry and continue for a number of years, unless they have the chance of a specially good parish. These form a sort of reserve from which in time of need men are drawn for ordination, often even at an advanced age; and thus it may happen that for a considerable time the number of persons ordained may be larger than that of the licentiates for the same years. This reserve, however, has also a limit, and cannot well be drawn upon for fifteen consecutive years, especially as it could have been but feebly supported for the years preceding. The difference therefore must be otherwise made up. Natives of other States are licensed on the strength of a conference, and are then reckoned along with the above number of licentiates, so that it is only from the new provinces that an accession can be looked for, and what the exact proportion of these is we have unfortunately no information. These are not under the supervision of the Oberkirchenrath, which since 1876 has organized an excellent and homogeneous statistical inquiry for the eight provinces. Of this, however, there can be no doubt, that what most strikingly marks the insufficiency of the number of theological students is the measure in which the supply of licentiates has for the last fifteen years come short of the number of new appointments. Still stronger is the evidence for this found by comparing

the vacancies with the number of licentiates. From 1863-72 214 new appointments fell to be made yearly, and from 1875-9 the number was 206; against these, in the first period there were 228 licentiates, and in the second only 153. In the most recent years, therefore, there was a yearly deficiency of about 53—*i.e.*, one fourth of the vacancies could not be supplied from the regular increase—a rate at which the old reserve must unquestionably be soon used up. But as the numbers of the licentiates, of the persons ordained, and of the vacant charges, cannot be traced far back, we must carry our comparison to the livings. For the year 1840 there were in Prussia 5,791 posts for ordained preachers; there were in 1852 in Prussia 6,054 ordained pastors, inclusive of the united confessions * and the dissenters; and in 1880 there were 6,608, exclusive of the Lutherans and the dissenters. In this number, however, are included the unendowed posts, without which the number in 1878 was 6,274, and in 1875 6,204.

The number of posts newly founded and discontinued in Prussia was as follows:—

	1815-40	'41-50	'51-60	'61-70
Newly founded,	162	137	274	268
Discontinued,	205	7	8	7

We find, further, that more were founded than discontinued in 1875, 16; 1876, 14; 1877, 17; 1878, 4; 1880, 11 Accordingly, the relative figures, including the unendowed, stand as follows:—

	1815	1840	1850	1860	1870	1880
Ecclesiastical posts,	5,884	5,191	5,921	6,187	6,448	6,608
Do. for every 100,000 inhabitants,	87	65	58	54	52	48

The question now comes to be, How many students of theology ought there to be to meet the wants of the country?

* [See Appendix, Note 5.]

As above said, there were in the Old-Prussian provinces from 1863-72 214 charges, inclusive of some twenty new ones, vacant yearly. In the period from 1875-9 there were 193 vacancies yearly (108 by death, 75 emeriti, 9 by resignation, 1 by dismissal). In addition to this there were 13 charges founded in excess of those discontinued, so that in that period there fell 206 appointments to be made yearly. That would give 34 years as the pastors' average length of service. In the year 1880 * the average period of service of the clergy who had died and were *emeriti* was 35·66 years; in 1878, 35·04; in 1877, 34·5; in 1876, 34·3, which must be a little further reduced by the clergymen who retire for other reasons. We are therefore obliged in more recent times to assume 34 years as the general average period of clerical service; in this period the supply of candidates was small, so that an early appointment could be counted on after passing the examination. Farther back, however, when candidates had to wait several years for an appointment, as in the *thirties*, the period of service must also have been shorter; and so, 30 years, which has been assumed as the period of service for that time, may not have been too low. In 1840 the number of yearly vacancies was reckoned at 193, and the number of students of theology requisite to meet this demand was calculated on the basis of a three-years' course, and on the assumption that a large number of students of theology took to other professions, at 800, or close on 14 per cent. of the total number of posts. From our previous inquiry, however, it appears that the loss to the time of license must be set down in a three-and-a-quarter years' course at 28 per cent.; and on this supposition an average of nearly 950 students

* The number of retired clergymen in Old-Prussia amounted from 1858-77 to 1,336, or 66·8 yearly. Their average period of service was 37·94 years.

might be regarded as sufficient, but on the assumption of a somewhat shorter period of service we will probably not be far wrong in putting the requisite number of students for that period at 900. As an actual fact, that figure was passed in the whole period from 1820-40—from 1828-32, indeed, it was almost doubled, and it is generally allowed that in that period the profession was overcrowded.

On a calculation similar to the above in the *forties*, about 920; in the *fifties*, 950; and from that time to 1880 about 1,000 students were to be regarded as the normal number. The yearly supply, as we saw, in reality amounted in the last fifteen years to about 210, which made on an average course of three-and-a-quarter years 683, and by a loss of 33 per cent., almost 1,000 students, as covering the demand. Imperfect as the calculation is, it may still with certainty be said that in Old-Prussia neither in the *forties* nor the *fifties* up till 1857 was the normal number reached; there was rather a considerable deficit, which could only be made up in the way mentioned from the old surplus. As the number of Old-Prussian students of theology from 1841-6 is to be taken at about 850, from 1846-51 at 630, from 1851-6 at 693, the deficit must on the lowest calculation be estimated in the fifteen years at 150 students. In the following decade the normal number was even surpassed, and from that time the number of fresh candidates for the preacher's office is greater than the number of persons ordained, while this latter number, for the first time in the following quinquennium, 1866-71, surpasses the necessary number of 200. In the last decade the deficit becomes still more emphasized by this comparison between the number of charges and that of the students. At the beginning of the *seventies* there was a shortcoming of about 350, or a complete third, which in the second half of the decade was

reduced to a fourth. In the winter semester 1880-1, however, the normal number was again reached, in the following it was somewhat passed (1082), in the summer semester very considerably so (1406), and, considering the general increase in the attendance, it is to be assumed that in 1882-3 the figure at once necessary and desirable has been already passed by about one-half. It is clear, therefore, that all grounds of the former anxiety about the supply have now been removed; indeed, the opposite difficulty of overcrowding may have to be considered at no distant date.

Let us take one glance more at the present supply of Prussia.

By favour of the Director of the Prussian Statistical Büreau, Privy Councillor Blenk, we have been informed that in Prussia of its present size in 1880 the number of Protestant clergymen amounted to 9,300, or 53 per 100,000 Protestant inhabitants, and in 1867 the number was 9,050.

We saw that in Old Prussia, in about 6,730 charges, including the dissenters, 214 new appointments had to be made yearly, and that 1000 students were to be regarded as the normal number. On this basis in Prussia, of its present size in 1867, the normal number of Protestant theological students may be set down at 1,350, and in 1880 at 1,400; while in the 15 semesters from 1866-74, there were, on an average, 944, and in the following 15 semesters, to 1881, only 754 Prussian students of theology at Prussian universities.

In 1880 and 1881 an average of 291 Prussian students of theology studied at non-Prussian universities, or 26·1 per cent. of the rest of the Prussian students of theology, and we may further calculate this proportion among the Old Prussians from 1866 to 1874 at 11·4 per cent. From this it appears that the tendency has been to go from the new

provinces abroad rather than to Old Prussia, and also that changing from one university to another has increased. Assuming an addition for the earlier period of 15 per cent., and for the later period of 22 per cent., we shall not be far from the mark. We then get 1,110 and 966 Prussian students of theology, or over 300 too few. Only in 1880 the figure rose to 1,404. The normal figure was thus at least reached, and in the following semesters it has already been considerably passed.

It is, however, further to be noticed that the number of Protestant clergymen has steadily diminished in proportion to the population. If these officials are regarded merely as pulpit orators—and in most cases, unfortunately, they are nothing else—the diminution of their number quite corresponds with the greater density of the population, the orator then having only a larger audience before him. But if the clergy attend to their cure of souls, as is done among the Catholics, by frequent personal intercourse with their parishioners—and this, in our opinion, is in these days more essential than ever—the diminution of their number cannot be regarded with equanimity. We saw that in 1815 there existed in Prussia about 87 charges for every 100,000 of the population; in 1840 there were only 65; in 1850, 58; in 1860, 54; and in 1880, only 48. In Prussia the present position of matters is rather more favourable—namely, 53.

We have thus set forth and explained the figures bearing on our subject so far as these figures were accessible. We must refer in a few words to the causes of the fluctuations we have observed, although we are well aware that none but clergymen who have lived through a longer or shorter part of our period are in a position to take a satisfactory survey of the varying influences at work, and from them we hope and beg for some further information.

We previously drew attention to the fact that while the altered position of the theological faculty in the university system was bound, in course of time, to reduce the attendance at that faculty, there did not necessarily follow from this a diminution in the supply of clergymen. The only diminution was in the number of those who had been enrolled in the theological faculty, but who had never entertained the intention of occupying a clerical office. We saw, however, that this supply of our clerical resources had experienced violent changes, and the causes of these will form the subject of our next inquiry.

For the earlier period a satisfactory explanation has been given. Immediately following the Wars of Liberation a dearth of probationers in Protestant theology was felt. The students of theology had, like their comrades, entered the field as volunteers; but they found it less easy than the others to return to their former profession. Many of them remained in the army or obtained posts in the administration of the police or in that of finance. To fill up these gaps, and to take advantage of the favourable position of affairs, our youth flocked in far too great numbers during the *twenties* to the study of theology, more especially as this course made smaller demands upon their resources than the other faculties, and supplied another string to their bow, as students of theology could easily find employment in the educational service. How far the suggestion is well-founded that this tendency was greatly furthered by the influence of Hegel and Schleiermacher we do not undertake to decide. At the end of the *twenties,* and in the *thirties,* when the overcrowding became apparent, a backward movement set in which continued for some time, and went considerably too far in the opposite direction. The large number of old probationers who were knocking about as private tutors, and of

aged rectors holding the license for ordination, and vainly hoping to reach that goal, must have formed an effective warning against entrance upon a theological course. This period, however, went by, these reserves being gradually used up; and from the middle of the *fifties* to the end of the *sixties* the theological faculty showed a larger attendance, although it was still confined to moderate limits. There was nothing particularly striking in these changes, the alternate swayings of the pendulum being perfectly explicable by ordinary causes. It is more difficult to account for the backward movement which followed, and which in all but a few districts caused an alarming deficiency in the supply of clergymen. For this phenomenon the most varied explanations have been given; and where these have not been refuted by the recent flood tide, their weight has still been largely reduced, as many of the reasons brought forward—and these are mainly external ones—have, in some respects, changed but very little, and in others not at all.

As one of the main causes of the decline of the theological faculty, the insufficiency of the salaries of most of the pastors is rightly insisted upon. A large number of them were mere starvation* salaries.

It cannot perhaps be said as a general statement that the average salaries of the clergy were immoderately low, but the state of matters was aggravated by the great dissimilarity

* According to Ernesti, in the middle of the *seventies* the salaries of the clergy were :—

In Prussia, 1057 charges under £90, while the Oberkirchenrath, in Berlin, reckoned £120 an insufficient endowment, "on the ground that it could not give a suitable maintenance."

In Hanover, in 1862, 1,165 charges produced an average income of £112. In Saxony, at the beginning of the *seventies*, 1,096 charges gave £124 on an average, and of these 58 were under £60. In Bavaria the licentiate was secured in a certain income, which, however, up to his fortieth year, never exceeded £66, and after that was gradually increased to £100.

between over-rich livings and the very poor ones; not, indeed, that the salaries of the other officials, teachers for example, were more tempting; but as soon as other unfavourable circumstances arose in the case of the clergy, their wretched pay attracted more attention. In Prussia the introduction of the office of registrar in the year 1875,* and the consequent discontinuance or diminution of many perquisites, have told so severely upon clerical incomes that compensation has gradually been provided from the local and State funds.

Taking into account along with this the depreciation of money, and more particularly the increasing demands of life in recent times, we must allow a very considerable weight to this factor in the problem for the period before us. It was clearly bound, too, to tell all the more heavily in times of commercial prosperity when much larger incomes were readily to be made in other walks of life. It is little wonder, then, if at the very beginning of the *seventies* the ebb was at its lowest. A very good illustration of this is found in the university of Halle. At the period in question very few of the students of theology at that university came from the peasant and artisan class. In the three first of the periods given above† these classes contributed from 24 to 26 per

In the year 1862 there were—

In Mecklenburg-Schwerin,	361	charges,	with	an	average	salary of £150.
,, Mecklenburg-Strelitz,	68	,,	,,	,,	,,	158.
,, Saxe-Weimar, .	311	,,	,,	,,	,,	82.
,, Saxe-Altenburg, .	142	,,	,,	,,	,,	121.
,, Reuss (Younger Line),	54	,,	,,	,,	,,	79.
,, Duchy of Hesse, .	470	,,	,,	,,	,,	83.

* [On the passing of the Civilstands-gesetz for the whole German empire, the celebration of marriages was withdrawn from the clergy of all professions and handed over to civil functionaries. Marriage was rendered a purely civil act, and independent of all religious conditions.]

† Page 64.

cent. of all the students of theology; in the beginning of the *fifties* and in the beginning of the *seventies* they contributed under 15 per cent., whereas from '77-81 they contributed 20 per cent. The fact is still more emphatically illustrated in the time* of the speculation and building mania at the beginning of the *seventies*. Of all the students of the peasant and artisan class then at the university the percentage of those who studied theology was strikingly small. It was only 22·6 per cent. of that number, the corresponding percentage for the previous periods being 54, 66, 76, 82, and for the last period 31. Gradually, although slowly, both classes are regaining some confidence in the position of the clergy; perhaps they find their own still worse.

The same thing is observed among the manufacturers, landed proprietors, and merchants, as the following figures show:—

	Percentage of all Occupations represented by these Classes.	Of all the Students belonging to these Classes—Percentage who studied Theology.
1820-2	7·5	39·3
1832-6	13·5	40·2
1850-4	8·2	29·6
1872-6	9·0	9·7
1877-81	11·8	14·5

The inducement to give up the study of theology when once begun was specially encouraged by the extent to which students in the philosophical faculty were at that time in request owing to the multiplication of schools; and, besides, immediately at the end of the course they could count upon an appointment under much more favourable conditions than the pastors. The competition between these two closely connected studies was bound to turn out to the disadvantage of theology, and all the more so as in their first semesters the

* Gründerzeit.

theological students attend lectures in both departments, and the change from the one profession to the other may be effected without serious loss of time.

Among the causes of the falling-off in the theological faculty there is also adduced "the want of bursaries for the course at the gymnasium and for the support of students of theology at the university," and taking into account the increased cost of living, this is a cause to which still greater weight is to be attached. It is no doubt a correct enough contention that attendance at the university may be considerably promoted by the foundation of new bursaries. Without any essential change, however, in this respect the press of students to the university has quite recently powerfully increased, so that we are obliged to assume such a degree of improvement in the circumstances of the various classes concerned as to permit of the corresponding number of students attending the university. This is proved by the small numbers in attendance during the prosperous times, while lately, amid loud and general complaints on the low state of trade, a very high number was reached. No doubt it may be replied that the commercial world supplies but a small portion of our students, and that far more come from the officials of all sorts who are independent of commercial fluctuations. It is, as we saw, precisely from the classes where university education is not to be presupposed in the parents that every addition to the usual supply comes, and these are the only classes that give any considerable elasticity to our numbers.

In addition to these external causes, for the falling off in the theological faculty there are internal ones of no smaller import. To these we attribute the generally diminished interest in church affairs which marks the cultivated as well as the lower classes in the Protestant ranks, and the sceptical

Zeit-Geist which asserted itself even in the gymnasia. This could not fail to show its effects as well in the Protestant as in the Catholic faculty, although, generally speaking, it was more pronounced in the north than in the south.

It is undeniable that the rapid development of science has done much to bring about this state of things. Its results appeared to many irreconcileable with Christian dogma, and dazzled the people. The effect of this was heightened by the depreciatory attacks which were repeatedly made by the leaders of science upon the church, and these, when echoed among the representatives of the people and at public meetings, reached deeper down among the people. The lofty duties of the clergy were misunderstood and depreciated, and altogether there was much to lessen anyone's inclination to enter the profession. The acrimonious controversies, further, that took place both inside the church and between the church and the Government were enough to frighten the inclination out of any in whom, despite the above discouragements, there was any inclination to enter the profession left. This was distinctly stated in the resolution of the Eisenach conference, already mentioned, as a cause of the deficiency of theological students.

In Prussia, a further special deterrent from theology may well have been found in the intolerance of the ecclesiastical authorities, who called the clergy to strict account for every deviation from dogma, while the tendency of the times more than ever demanded toleration.

To all the causes advanced, however, the reply is at hand that in these respects no change has up to the present been effected, and yet the increase in the last semesters has been very great. To what, then, are we to attribute the striking change that has taken place? The deeper cause which prepared the way for the sudden crowding to theology is in our opinion to be seen in the wave of conservatism which is

undoubtedly passing over the country. The alienation from the church which marked the last decade has given place to a distinct reaction. The country regards that alienation as a calamity, and sees in it the fountain-head of the social democracy, the raw materialism, and the revolutionary movements so characteristic of the lower classes in our time.

The growing acrimony in recent years of the Protestant opposition to Catholicism and Semitism—so lamentable, nay, in many respects, so disgraceful to our country—has had an inspiring effect upon the Protestant consciousness. On the church, as the exponent of this consciousness, new duties have devolved, and it has thereby gained in authority and esteem. There is room for difference of view as to the newly-formed unions among German students with their more or less pronounced anti-semitic tendencies, but we cannot but regard them as an indication of a revived church life, and they must be allowed further to bring more students to theology and to keep them at it.

The change of feeling just mentioned could not fail to tell considerably upon the attendance, even although no change has been effected in the remaining conditions. It was supported by the badness of the outlook in trade and commerce, but more particularly by the overcrowding in the other branches of study, which was becoming more and more perceptible from semester to semester, and latterly also in philology. Those who, in any circumstances, would have taken a university course, and who had no special inclination for a particular line of study—and of such the number is very large—saw on the one side a long period of service either wholly without pay or with a mere beggarly living, or on the other an early-fixed appointment, no doubt with no very extravagant salary attached to it, but still offering the possibility of an early settlement in life.

In addition to this an improvement, although only a slight one, had taken place in the salaries of the clergy, and efforts were at the same time made on the part of the communes to make up to the pastors the loss they had sustained by the institution of public registrars. All this might amount to very little, still it showed the interest of the Government and the sympathy of society for the church, and inspired more confidence for the future.

In Prussia the minimum salary is now generally fixed at £90, while, as above stated, in 1875 there were over 1,000 charges with a smaller salary. After five years' service the minimum salary is fixed at £120, and after 20 years' service at £150—the State bringing it up to that sum if the commune is unable to do so.* We omit the differences between the individual provinces, and only remark further that in the Electorate of Hesse in 1874 the minimum of £60 was by a State supplement raised to £90. Our authority for this, as for what follows, is Pastor Otto Ritter, to whom thanks is due for his excellent treatise on "The Pay of the Protestant Clergy in Germany."

In Bavaria the minimum salary has now been raised to between £77 and £78, while up to the beginning of the *seventies* it did not exceed £69 till a man was forty years old. In Baden, the salary for the first seven years' service is only £80; from that to the tenth year of service, £90; to the fifteenth, £110; to the twentieth, £130; then £150, £170, and in cases of more than thirty years' service, £180 to £200—in all cases exclusive of perquisites. In Saxe-

* [In Old Prussia, in the year 1879-80, the direct cost of the Established Church to the State was £201,250: of this, administration cost £35,660; endowment of new charges and improvement of old ones, £1,800; various church objects, £5,832; payments and supplements to the clergy, &c., £157,960.—Herzog's *Real Encyclopädie für Theologie und Kirche*, vol. xii., p. 205.]

Weimar the following rates were introduced on 1st January, 1883 :—The minimum salary on appointment is £85, which is increased by £10 every five years till the twenty-fifth year of service, when it is £135.

Let us compare with this the salaries of the judges.

In Prussia the minimum salary of a judge is fixed at £120. A post like this, however, the judge gains considerably later than the clergy gain theirs—after four years' preparation and an intermediate year occupied as assessor without pay. By periodical additions of £40 the salary rises to £300, to which there is an addition on the score of house-rent of £18 to £33 (Berlin £45), always according to the service-class of the towns. The average salary of the judges in Prussia is £210. The directors of the gymnasia get from £240 to £330. The newly-appointed judge, accordingly, is equal to the clergyman after five years' service. Still, the latter from the beginning can count on some subsidiary income from his official duties, and, as a rule, finds in teaching the means of making this ; the only chance the judge has of increasing his income is by doing literary work. For length of service, however, he has the claim to an increase of more than double, while it is only after twenty years' service that the pastor reaches £150, and only by a change to an unusually well-paid charge that he receives a further increase. The county court judges draw an average salary of £210, to which about £25 may be added from other sources and from gratuities allowed by Government to individuals in particular circumstances.

The teachers in the higher schools receive on an average at the beginning £90, and a gradual addition up to £225, on an average £157 10s. To this since 1873 an allowance is added for house-rent. Since that date, so far as we know, no essential change has taken place. In small towns the

directors are paid on an average with £247 10s, in larger towns with £277 10s, and in Berlin with £330.* If the judges rank socially higher than the clergy, the opposite must, at least in Prussia, be said of the schoolmasters; and that sooner or later will certainly make itself felt.

In Bavaria the judges for the first three years are paid at £114, gradually rising, so that from the eleventh to the fifteenth years' service they are paid £150, and £9 additional for every additional five years' service. The pastor never exceeds £120, which is only a little above the minimum of a judge.

In Baden the salary of the judge is £90 to £225, exclusive of £12 to £27 for house-rent; the member of the county court, £125 to £260.

In Würtemberg the judge draws from £110 to £200; the county court judge, from £140 to £180—average, £160; the counsellors of the county court, from £220 to £260—average, £240. The pastors begin in the small charges with £87 10s. to £100, and by length of service, or by changing to a better charge, they rise to £150, and in the best charges still higher. Besides this, the charges have fees attached to them which bring in some few pounds, and there are also perquisites in kind, which have been valued too low. It must on the whole be allowed that the salaries of the judges are on a more liberal scale than those of the clergy; both, however, can only be described as excessively

* [The division of the service classes according to the size of the towns was adopted from the military service into Law and Education. The division is threefold—(1) Berlin; (2) towns of more than 50,000 civil inhabitants; (3) towns of 50,000 or fewer civil inhabitants. The house-rent allowed in Class 2 is 10 per cent. of the income, and in Class 3 7½ per cent. An interesting account of the controversy that issued in these arrangements, as of the social ranking of classes in general in Germany, is given in Schmidt's *Geschichte der Pädagogik*, vol. iv., pp. 757-771. An abstract of it is given in the Appendix, Note 6.]

scanty, the salary by itself being in both cases insufficient for the suitable upbringing of a family. The remarkable, nay, excessive, press to the university that, in spite of this, has taken place, indicates among other things the widespread plenty of the middle classes, which secures an addition to the income of most of the official class, either from their own fortune or from that of their wives. It argues, further, the continued existence in the popular mind of an ideal that leads them to value a good social position more highly than a big income, and an inclination to prefer this smaller but more certain income to one, on the whole, higher, but very uncertain. It proves also that there is no very great taste for a business career, merely as such, in the cultivated classes, and that such as exists is greatly diminished by every unfavourable turn of affairs.

We should like, in conclusion, to inquire what may be gathered in this connection from a consideration of the classes from which our students of theology are drawn.

It has been adduced as a proof of the increasing strength of the wave of materialism in the *seventies* that in the consistorial-circle of Hanover the licentiates in theology came in the following percentages from

	1841-50.	'51-60.	'61-70.
Larger towns,	31·8	19·0	18·9
Smaller towns,	13·7	33·3	11·7
Towns of both classes,	45·5	52·4	30·6
The country,	54·5	47·6	69·4

The decrease of the proportion from the large towns is no doubt remarkable, although these contain a considerably larger percentage of the population, and especially of the well-to-do population, than formerly. Equally noticeable is the increase in the proportion from the country districts.

The figures for the most recent period unfortunately fail us; but even could they be got, they would not be sufficient to give us averages which would be characteristic of the most recent tendencies. From the figures for Halle, however, we are of opinion that these tendencies are in the direction of a restoration of the old proportions. More important, perhaps, is it to notice that the clergy themselves have been ceasing to put their sons into their own profession, and this in a growing degree in the most recent times. In the further back periods here noticed from 72 to 80 per cent. of the sons of clergymen at Halle studied theology; from 1872-6 the proportion went down to 44·2 per cent., and rose again from 1877-81 to 58·3 per cent. A slight improvement, likewise, is to be noticed among the sons of higher officials and teachers, although the improvement here has been far slower, while the downward tendency in the period before our last was quite surprising. Of the sons of teachers trained at the university, more than half formerly took to theology; from 1872-6 the percentage of such was only 11·15, and at present it is 13·4. This alteration is doubtless quite in accordance with that of the study of theology at the university all over.*

The connection between commercial depression and attendance at the university seems to be expressed in the fact that among the students of theology at Halle the sons of artizans and peasants form a far higher percentage in the last than in the two earlier periods—20 against 14·6 per cent. Merchants, manufacturers, &c., supplied, as previously shown in the last period, 13·8, and in the previous ones, 11·9 and 9·9 per cent.

*Ernesti, in proof of his contention that the students of theology come from the lower classes and require special support, gives the following short table on the occupation of the parents of the licentiates, and with this

After all, however, we are of the opinion that favourable external circumstances have most to do with the increased attendance at the theological faculty—that the vacant charges, in the face of the risks* of success, and the longer time necessary to wait for it in the other departments of study, really form the *punctum saliens* in our inquiry. The change, therefore, as possessed of any higher ethical value, is only of doubtful significance, although we are decidedly of the opinion that these material considerations did not, by themselves alone, produce the extraordinary effect. This rather was only rendered possible through a real change in public opinion.

The theological and medical faculties have been viewed as representing respectively the sciences of mind and matter, and the attendance at these has been said to be a tolerably reliable barometer of the changes in the atmosphere of the world of mind at particular periods. In giving theology

may be compared the figures we gave for the theological faculty at Halle, in the table on p. 64.

Occupation of Parents.	Consistorial Circle of Hanover.			Established Church of Brunswick.				
	1841-50	'51-60	'61-70	'29-38	'39-48	'49-58	'59-68	'69-78
	p. c.	p. c.	p. c.					
1. Noble, . .	0	0	0	1	—	—	—	1
2. Pastor, . .	33·7	43·0	48·4	32	45	18	26	10
3. Teacher, . .	10·6	12·2	17·7	17	12	7	6	1
4. Officer, . .	2·2	2·8	0·7	1	4	—	—	—
5. Higher official or physician,	15·2	11·8	7·0	29	18	6	12	6
6. Lower official, .	13·9	14·0	6·4	11	10	6	8	3
7. Higher trading class, . .	8·0	5·6	4·1	16	7	2	1	—
8. Lower trading class, . .	12·0	6·8	8·1	42	8	9	10	6
9. Farmer, . .	2·9	0·5	1·4	5	4	2	—	1
10. Peasant, . .	1·5	3·3	6·2	7	6	3	5	2
				161	114	53	68	30

* [The phrase in the original is an expressive one : *hochgehängten Brodkörben*, "high hung bread baskets."]

this position we are of opinion that an importance is assigned to it which it once possessed but now possesses no longer. The attendance at the theological faculty is in some limited sense an indication of a favourable leaning to the church on the part of the upper classes, but not of a taste for philosophy. The measure of the interest in science or philosophy is rather to be found in the attendance at the different branches of the philosophical faculty—a point to which we have to return.

I. THE FACULTY OF THEOLOGY.—B. CATHOLIC.

THE same phenomenon presents itself among the Catholic as among the Protestant students of theology—but among the former in a higher degree—as regards the fluctuations and falling-off in the attendance down to recent times. There is complete agreement in this respect between the two confessions, although the years of the extremes do not correspond. In the Catholic faculty also, all over Germany, the highest figures are in 1830-1, with 1,800 ; five years later this number was reduced to almost one-half, and in '40 and '41 it went down below the half to 866. This is to be kept in mind. For this period we find the same thing in all departments of study. It is the result of the collective circumstances of the time, and not the mere alternations of supply and demand in a particular profession. At the end of the *forties* the number of Catholic students increased, while that of the Protestant students diminished after 1846-7. From 1848-60 the number, with some variations, maintained itself at 1,200 to 1,300 ; it then slowly but steadily went down till in 1879-80 it was 619, and then gradually rose again to 695 in 1881-2, and 757 in 1882-3.

The following table gives the number of Catholic students

of theology in all Germany, and their distribution throughout the universities:—

Year.	All Germany.	Breslau.	Bonn.	Münster	Munich.	Würzburg.	Tübingen.	Freiburg.	Giessen.
1830-31	1,800								
'31-36	1,277	219	185	187	281	90	142	143	30
'36-41	930	177	99	151	187	88	92	99	37
'41-46	989	198	117	153	183	84	132	85	37
'46-51	1,256	219	184	174	242	114	136	138	49
'51-56	1,256	230	202	193	207	96	143	185	—
'56-61	1,202	180	219	258	136	96	134	179	—
'61-66	1,117	176	211	254	95	89	130	162	—
'66-71	974	139	186	231	92	82	111	133	—
'71-76	827	95	107	213	76	134	118	84	—
'76-81	664	65	87	94	84	142	149	43	—
'81-84	787	130	65	112	116	162	150	52	—
'83-84	825	144	79	112	134	165	157	61	—

The non-Germans, especially the Swiss and Austrians, who study Catholic theology at the German universities, were never represented by large numbers: in the most recent periods the numbers grow smaller and smaller, and in the sequel we may leave them out of account. The averages in the first column of the above table yield the same result as the individual years formerly noted. The lowest ebb here is in the second half of the *seventies*, and not, as on the Protestant side, in the previous quinquennium. The flood is likewise at the beginning of the *thirties*, although the first half of that decade is not so much above the second half as among the Protestants. The whole period, rather from 1846-61, comes very near it. The bound upwards begins ten years earlier among the Catholics than among the Protestants, just as the falling off follows ten years earlier, and lasts considerably longer.

The figures for the Old-Prussian provinces give a result that differs nothing from that for all Germany; the fluctuations even strikingly correspond, only the falling-off in

Prussia of recent date has been far more considerable than in all Germany. It must not, however, be forgotten that only a few non-Prussians come to the Prussian universities to study Catholic theology, while many Prussians go to the non-Prussian universities; the number of the latter for the two semesters of 1880-1 being on an average 91, in which, how-however, New-Prussians are included. But as the annexation of 1866 added to Prussia but little Catholic territory and no Catholic faculty, the amount of error from this source must be small.

In the Old-Prussian provinces there has been a very striking increase in the number of students of Catholic theology since the year 1880. In that year the number of students was 196; in 1882 it was 306—an increase of 56 per cent., or an increase of 29 per cent. above 1881-2, when the number was 238.* The advances of the Prussian Government and the prospect of an end to the conflict have evidently had a very encouraging effect. It must further be kept in view that many Prussians have quite lately gone to study abroad, nearly 100 being at Innsbruck alone. One of Falk's laws of 1874 drew attention to the fact that the course at that university could not be regarded by the Government as a training corresponding to section 4 of the law of 1873, and that the dispensation mentioned in section 5 of that law was not to be looked for.

As is well known, Germany has at present Catholic faculties of theology at six universities; in Prussia there are such faculties at three. Up till 1851 a seventh university, Giessen namely, possessed a Catholic faculty which was that year suppressed. Münster, which was founded as a university in 1780, but for long attained to no importance,

* [For 1883-4 the number of Catholic students of theology at the three Prussian Catholic faculties—viz., Breslau, Bonn, and Münster—was 335.]

was in 1818 divested of its character as a university. Its place was taken by Bonn, but at Münster, meanwhile, there was still retained a course of systematic theology, and, as preparatory to this, a course of philosophy and science for intending clergymen. It was not till 1832 that the theological and philosophical faculties at Münster obtained equal rights with those of the other universities.*

In the *thirties* and *forties* Breslau was the favourite resort for Catholic students in Prussia, and Munich for those in the rest of Germany. After the middle of the *fifties* Breslau fell off and was beaten by Bonn, and still more by Münster, which at present is the best attended in Prussia. Munich has lost in attendance since 1856, and still more since 1861; while from 1836 to the present time the attendance at Tübingen has been singularly steady. Since 1871 Würzburg has enjoyed special popularity; the Prussian students, too, have a preference for it.

The Hosian Lyceum at Braunsberg, erected in 1818, also possesses higher academic privileges, so that the students at that institution are to be regarded as on a level with those at the universities. But we possess returns for it only for a few years. It is not before the middle of the *seventies* that the general report notices Braunsberg among the universities. We have therefore preferred to leave the Hosian Lyceum altogether out of account: and this we can do all the more as it is of no consequence as a source of error. The attendance in the recent years given was unimportant, 12-20 students, of whom from 6 to 8 belong to the philosophical section, so that the number of theological students there is very small.

Our treatment of this Lyceum seems all the more justified,

*[In official documents it is addressed as an academy. Thus, an order from the Department in Berlin in 1882, is addressed "An die philosophischen Fakultäten der königlichen Universitäten, der königlichen Akademie zu Münster und des Lyceum Hosianum zu Braunsberg."]

as down to 1874 several such institutions existed, a three-years' course at which could be reckoned of as much value as attendance at a university with a view to entrance into a seminary. In 1874 these rights were withdrawn. On the attendance at these institutions we have almost no information.

For the years 1832-4 Dieterici mentions the five lycées, or, as he calls them, seminaries, then existing—Trier (Trèves), Paderborn, Pelplin, Posen, Gnesen, at which the average number of scholars was 163, and of these 159 were native Prussians. To be quite exact, these and the 20 at Braunsberg should be added to the 588 Catholic students in order to a correct comparison with the number of students at the present day. We should then for 1832-4 have 827 Catholic theological students, of whom 767 were Old-Prussians; and in 1881-2 290 students (including Braunsberg), of whom 273 were Old-Prussians. In this way the antithesis comes out more sharply, and a more correct impression is obtained. In the absence of a perfectly correct comparison, it is at least of importance to find out the number of Catholic students of theology who at different times aimed at a university training, while it was open to them to reach the simple office of parish priest otherwise than through the universities. Besides, the number in earlier times was much smaller who had pursued their studies abroad, especially at Löwe and Rome, and had been ordained here, or who had been ordained abroad—at Rome, for example—but had been appointed to a charge here.

As the cause of the high attendance at the end of the *twenties*, mention has been made of the efforts of enlightened bishops to give the Catholic clergy a wider culture; and the decrease in the *thirties* is attributed mainly to the growing loss of confidence in the universities on the part of the higher ecclesiastics, in consequence of the contests between

Church and State. A special illustration of that is seen in the rapid decrease after 1833 of non-Prussian Catholic students at Prussian universities.

The question has been asked whether, on the ground of the foregoing figures for 1876-81, it can be maintained that the Kulturkampf has quickened the activity of the Roman communion, while it has done damage to the Protestant. To this question we can only reply that the figures neither support the contention nor refute it. A struggle between Church and State naturally limits the attendance at the universities in the country where the struggle is going on. That, however, is no proof that a smaller number than usual were taking to the study of theology all over. We saw above that no inconsiderable number of our Catholic students studied theology abroad. It is further a fact—one, indeed, that cannot well be set forth in figures, but still a fact—that the ecclesiastical orders in foreign countries, in Holland, Belgium, England, and America, have since 1874 received strikingly large accessions from Prussia. No doubt the revival of church life could exhibit itself in another fashion, and this it has done in rich measure—in the large pecuniary sacrifices, for example, in support of their church which the Catholic population has voluntarily made to make up for the funds withheld by the State. The increase in the number of students expresses after all only one side of that life which can find all the more powerful expression on another. We may well believe that in the districts affected by the struggle the feelings of the Catholic population have been powerfully excited in favour of their church, although we cannot express the extent of that feeling in figures. It belongs to a sphere which cannot be described in statistics.

The decrease comes out more strikingly when we compare the Catholic students of theology with the Catholic population:—

Year.	Catholic Population of Germany.	Catholic Students of Theology for every 100,000 Ca. inhabitants.
1831-36	10,887,641	11·1
1836-41	11,504,737	7·9
1841-46	12,121,592	8·0
1846 51	12 525,602	9·8
1851-56	12,853,824	9·6
1856-61	13,362,321	8·7
1861-66	14,127,137	7·9
1866-71	14,620,955	6·4
1871-76	15,334,560	5·3
1876-81	16,197,183	4·0
1881-82	16,229,290	4·3

From these figures it appears that in comparison with population the number of Catholic students of theology has in Germany gone down to almost a third of what it was at the beginning of our period. In Old-Prussia the decrease is greater still, the proportion at the end of the *seventies* being then exactly a fourth of what it was at the beginning of the *thirties*. In the Protestant communion from '76-81 there were 6·76 students of theology for every 100,000 Protestant inhabitants, while in the Catholic the proportion in the same number of Catholic inhabitants was only 4·0.* As a general rule they remain steadily behind the Protestants in this respect, but from '46-56 the proportion was reversed, that proportion being among the Protestants 7·7, and among the Catholics 9·7. Still, as already explained, it is only since 1871 that a correct comparison of the proportions of the two confessions in this respect is possible.

After passing the examination on the basis of the three years' course, the Catholic students have to make up another

* At the seven Austrian universities there were from '76-81 4·11 students of theology for every 100,000 inhabitants.

year-and-a-half in a seminary, and it is only after a second examination that they receive ordination; four-and-a-half years must thus intervene after their Abiturienten-examen before they can receive a fixed appointment—an arrangement which agrees with that among the Protestants.

This must be taken into account in our next step—in the comparison, namely, of the number of students to that of the posts to be filled. We should here take account of the members of the seminaries who require, like the Referendare in the legal profession, to pass through a period of probation, but the number of these we were unable to ascertain. For the period from 1826-31 it has been set down at an average of 250, but in this number lycées and seminaries seem to have been classed together.

The number of Catholic charges in the Old-Prussian provinces has experienced but small increase, and this increase consists in the larger number of curates and chaplains appointed. According to our sources of information these were :—

					Total Clergy.
1828	—	Parish Priests.	—	Chaplains and Curates.	5,548
1834	3,510	,,	2,033	,, ,,	5,543
1840	3,539	,,	1,992	,, ,,	5,531

In Prussia of its present size :

					Total Clergy.
1867	4,451	Parish Priests.	3,239	Chaplains and Curates.	7,690
1881	—	,,	—	,, ,,	7,125

Comparing these figures with the Catholic population and the number of students we get the following :—

	For every 100,000 Catholic Inhabitants. Cath. Students.	Cath. Clergy.	Students for every 100 Clergy
1828	13·7	110	12·3
1834	10·1	111	10·2
1840	7·8	98·7	7·7
1867	8·0	94·0	8·6
1881	3·2	83·6	3·8

The number of students at present comes so far short of the requirement that the clergy must shortly die out—the majority of the charges must remain unoccupied—unless there is a speedy change for the better. This result, too, must come all the sooner as the ranks can no longer, as in former times, be recruited from abroad.

Dieterici assumed the length of service of the Catholic clergy to be the same as that of the Protestant—namely 31 years. For the period 1832-4 he found the yearly supply of candidates requisite to fill the vacancies to be 178. The result of our inquiry in the case of Protestant students we may apply to the Catholics, although among the latter a smaller proportion go off into other professions, the discipline as a rule being stricter among Catholic students. On that basis the normal number of students at the beginning of the *thirties* might be estimated at about 900, while at the Prussian universities there were only 590 native students, and only a very few additional ones at the other German universities, although the deficiency no doubt might have been covered by the lycées mentioned above. More recently the length of service of the Protestant clergy was fixed somewhat higher. But as celibacy, in the opinion of many, is not favourable to length of life, and the largely increased burden of work at present laid upon the Catholic clergy must tend to shorten life still more, 30 may rightly be assumed as a divisor of the number of charges to yield the number of yearly vacancies in the ranks of the Catholic clergy. We thus get in the Old-Prussian provinces about 240 charges to be supplied yearly, while from 1876-81 there were altogether only 232 Old-Prussian students, and more than four times that number would be required to supply the demand. Indeed, all the Catholic students in Germany taken together,

about 700, could no longer supply the needs of the Old-Prussian provinces alone.

In the whole of Prussia, of its present size, the number of yearly vacancies for 1881 is to be taken at 250, to meet which there is certainly need of over 1,000 students, and yet in 1880-1 and '81 the average number of Prussian Catholic theological students was only 299. In all Germany, according to "The Pocket-Book for the Catholic Clergy," there were 17,810 secular priests, besides 446 regular priests who are not to be taken into our present account. The Catholics belonging to the respective dioceses are returned at 15,767,159; by the census of 1880 the number of Catholics in Germany is set down at 16,229,290.

We thus get for Germany 113 secular priests per 100,000 Catholics, while in Prussia the corresponding number is only 82. Still, that is a higher number than among the Protestants, where the number at present is only 53, and in Old-Prussia only 48, per 100,000 Protestant inhabitants. In the present distress, therefore, the Catholic population is on an average nearly twice better supplied with clergy than the Protestant—a proportion which will assuredly be changed in the near future. At the same time it must be remembered that the Catholics in Prussia live much scattered, and many of the cures can contain only a very small number of souls.

For non-Prussian Germany the results of course were more favourable. For 7,024,360 Catholics there are 10,295 clergy, or 146 to every 100,000 Catholic inhabitants. The difference is surprising. In Bavaria alone for 3,748,032 Catholics there are 5,825 secular priests and 425 regulars, *i.e.*, 155 secular clergy for every 100,000 Catholic inhabitants.

AUSTRIA can only with some difficulty be brought into the comparison, as there the clerical Orders play a conspicuous part, and the two Greek churches, with their different arrange-

ments, have to be taken into account. The secular clergy amounted

In 1875 to 13,976, exclusive of young aspirants.
„ 1880 „ 13,654 „ „ „

That was 70 and 66 per 100,000 belonging to the Catholic and Greek churches respectively. If the regular clergy are added, we find a little over a hundred for the same number of inhabitants—a proportion rather smaller than that for Germany.

In the years 1881-82 there were at German universities 406 non-Prussian German Catholic students of theology, *i.e.*, 5·8 students per 100,000 Catholic inhabitants. In Bavaria there were 138, or 3·7 per 100,000 Catholics.

In the Bavarian lycées * there were for 1869-72 247 Catholic students; these required to be added to the Catholic students of theology at the universities, who are considerably fewer in number. This number is doubtless too high for the present time, but in the want of more recent figures may be accepted. The total number of students consequently was 358, or 10·3 per 100,000 Catholics. In comparison with the existing priests this number is 6·6 per 100, but taking university students alone only 2·3. In non-Prussian Germany the proportion was 3·9 per 100 priests. In Bavaria the increase in the number of theological students is no doubt considerably greater than in Prussia, but still the number, including those in attendance at the lycées, is, when compared with earlier times and with the needs of the case, surprisingly small. In proof of this it needs only to be remembered that in

* Mayr, page 84. Those in attendance (in round numbers 400) at the clerical seminaries are at the same time in attendance at the universities. These institutions, however, are rather intended for training than for instruction; they are differently organized, and have different objects in view from the clerical seminaries in Prussia.

Prussia in 1867 there were 8·6 and in earlier times 12·3 university students alone, altogether apart from those in attendance at the lycées, for every 100 priests.

The yearly vacancies in Bavaria are to be estimated at 194, and to make up for this waste at least 600, more correctly 900, students appear to be necessary, while there are actually not 400, or only the half. In Regensburg* lately only from 12 to 15 priests have been ordained yearly, while about 40 were necessary to fill the vacant posts. In Baden* the increase in 1882 amounted only to 11 priests, while in earlier years the normal yearly number was 40—one indication that the profession is regarded as offering no well-assured future.

We cannot, however, as already remarked, argue from this alone to a falling-off in favourable feeling for the church all over. In the work of Dr. Fr. Heiner, mentioned below, which treats the whole subject with great candour, and with a striking *naïveté*, the author, who evidently knows his subject well, is decidedly opposed to the idea that the cause of the want of priests is to be sought in any diminution of good-will to the church on the part of the Catholic communities.

It appears to us a noteworthy result that the falling-off in

* Franz Heiner, "The Life of the Catholic Church in Germany, or the prevailing dearth of Priests." Paderborn, 1883. The author further says :— "For our purpose the statement of the universally admitted fact is sufficient, that in the last decade, according to the statistical returns of the universities and the lists of the clerical seminaries, the number of students of theology has enormously decreased and has become not only relatively small but insignificantly so. On the other side there is the further fact that the number of vacant charges is daily increasing not only in every Prussian diocese, but in particular dioceses of South Germany also gaps are already noticed. In others, however, where this has been hitherto avoided by the appointment of young Prussian clergy, vacancies in larger numbers will arise so soon as the Kulturkampf in Prussia comes to an end. The bishops, indeed, are already looking forward with trouble and anxiety to the day when the foreign priests are to return to their homes. And the mischief of the want of priests must continually increase if no consideration is given to the means of again restoring the study of Catholic theology."

the number of Catholic students is by no means limited to Prussia alone, but is also seen among the strongly-Catholic Bavarians. The theological course has, in point of numbers, fallen off equally during the last decade in both communions, but in the latest semesters on the Catholic side there is an unmistakeable effort at improvement. In Prussia, no doubt, concessions have recently been made by the Government to the Curia whereby the admission of ecclesiastics to the performance of official duties is considerably facilitated; but, in spite of these, unless a great and speedy change takes place, the Catholics will soon not have in the country the necessary number of ecclesiastically competent persons to hold the corresponding ecclesiastical cures.

It may be of interest to show that in Austria, too, the study of Catholic theology is at a very low ebb. For the earlier periods, as already mentioned, we have returns only for particular years, which, however, may be regarded as typical. The number given in the first column of the following table gives the entire number of students of theology at the six,* or, as it was later on, including Czernowitz, seven Austrian universities belonging to the kingdoms and States represented in the Reichsrat :—

	At the Universities.	Total Students of Theology.	Clergy of the Christ. Confession.	Clergy for one Theol. Student.
1841	889	2,691	20,948	7·8
'51	753	2,657	22,573	8·5
'61	656	1,934	21.742	11·2
'71	1,129	2,874	21,698	7·5
'76	614	1,956	21,699	11-1
'81	1,093	(?)	22,038	—

From these figures it appears that in the middle of the

* Vienna, Gratz, Innsbruck, Prague, Lemberg, Cracow.

seventies matters had in Austria also reached a very low ebb, giving room for the remark of Schimmer, that "the number of youth in Austria entering the clerical profession is at present so small as to give occasion for the most serious anxiety." Recently a distinct improvement has taken place. The fluctuations are visible in the total number of students of theology just as in the number of those who finish their studies at the universities. The total number of theological students for the most recent semesters we cannot state. There is a considerable increase in the number of seminarists in recent years. In 1875 they numbered 1,729; in 1870, 2,669; and in 1880, 2,090—fluctuations exactly corresponding to the attendance at the universities.

It is to be observed, however, that foreign students of theology form a more conspicuous element in the Austrian universities than in Germany. Of the 901 students who were in average attendance at the theological faculties in Austria from 1876-81, only 676 were native Austrians, and among these, again, some were unmatriculated students; and in the year 1880-81, after deducting foreigners from the 1,093 students, there remain only 850 who can here be taken into account.

The number of clergy of the Christian Confession in Austria is set down for 1871 at 21,698, and for 1876 at 21,699. On our calculation the number for 1880 possibly amounts to 22,083, and assuming 31 years as the period of service, the average annual demand would be about 700. In the middle of the *seventies* the clergy who had had a university education could not have supplied a third of this demand; and before and after that period they could not have supplied a half, assuming, in both cases, no more than a three years' preparatory course. The 8,318 Latin-Catholic parishes and local chaplancies in the year 1880—for which

a yearly average of 268 vacancies may be assumed—would absorb the entire number of students with a three years' course; while the ecclesiastical Orders—with 4,181 priests and 966 clergy and novices, the 2,351 Greek-Catholics, 484 Greek-Orientals, and 224 Protestant clergy—have likewise to draw from the same source. We are uncertain as to the length of the course of study to be assumed for students of theology all over, including those whose preparatory training is obtained at the lycées or seminaries. By assuming only four years, the demand amounted to 2,800, which was met in the year 1871, but not in 1876.

From all this it follows that Catholic theology is far too little studied at the Austrian universities. In the middle of the *seventies* the neglect of the study was at its highest, while at the beginning of the *seventies*, when in Germany interest in theology was at its lowest, the attendance was more favourable. As in Germany, a considerable bound upwards has quite lately manifested itself. In Austria, however, this has kept within more moderate limits, and has not yet gone beyond the number of 1871.

It is a noteworthy fact, then, that while nearly every other branch of study is full to overflowing, in Catholic theology a dearth of students has become chronic, nor has this been made up of recent date at all in the proportion seen in the Protestant faculty. In tracing the causes of this fact we have some much-wanted information from the excellent treatise of Heiner mentioned above. As already said, Heiner does not think that it is any want of respect for religion or the church in Catholic families that has caused the dearth in question. We are thoroughly of this opinion, and in this we see a difference between the Protestant and Catholic population, and a distinct point in favour of the latter. A second great difference, and one referred to before,

lies in the fact—admitted by Heiner—that the Catholic clergy are most largely recruited from the lower classes, especially from the ranks of peasants and artizans, while it is mainly from the cultivated classes that the Protestant clergy are drawn. Among the Catholics, as a matter of course, the clergy themselves are entirely wanting as the fathers of students of theology. Among the Protestants, on the other hand, as many as from 30 to 40 per cent. of such students are the sons of clergymen. The circumstances, therefore, that mainly regulate the attendance will naturally be such as especially affect the poorer and less cultivated portion of the population.

A further contention of Heiner is that the modern (or elementary) schoolmaster is largely to blame for the want of priests. Too many of these, he says, have deserted the Church, and themselves inspired with the *Zeit-Geist* of liberalism, they are no way disposed to check the roving tendencies of youth and to inspire their pupils with affection for the Church. He mentions, as a special obstacle, the Bavarian Regulation, "that no boy above 12 years of age be admitted to a gymnasium"—the authorities going on the supposition that the rustics who develope late never think of the future till they leave the elementary school, and that it is then too late, for those who feel the inclination, "to study for the Church."

Heiner further emphasises the cost of the course at the gymnasium, which, with the increased cost of living, is unquestionably more seriously felt at present than formerly. He maintains, also, that the number of students from the rural districts, from which the ranks of the clergy are most largely recruited, has considerably diminished, and mentions this as a fact which every prospectus issued at the gymnasia at the close of the year demonstrably proves by figures. To this last statement we demur. As above shown, the reverse

of what he says is observed among the theological licentiates in Hanover, and our numbers at Halle do not support his contention at all. It is also doubtful if a statistical return of the gymnasia of North Germany bearing on this point would yield such a result. The absolute number, at anyrate, of scholars belonging to the towns must be larger, as the town-population has more largely increased; but, even relatively, we do not think that the country in respect of sending boys to the gymnasia has fallen behind.

It must doubtless, however, be admitted that the expense of training at the gymnasium and the want of Catholic training-schools form a main cause of the deficiency of fresh recruits for the Catholic clergy; and it tells far more upon them than upon the Protestant clergy. As the peasantry—the main recruiting ground for the Catholic clergy—require pressure to be brought to bear upon them, it is only natural for Heiner to wish "the clergy to get at them personally to urge the sending of their sons to the university." No other profession requires such a stimulus; the peasants on the contrary and the artisan class form already, in our opinion, considerably too large a proportion of the other professions.

We have ourselves hinted above that the atmosphere of the gymnasia is not over favourable to the theological course, and this is emphatically mentioned by Heiner as one of the main causes of the dearth of priests. We, however, did not lay the blame of this upon the ancient classics, nor would any Protestant clergyman swear to the dictum which we extract from the work of a Doctor of the Canon Law on the subject under discussion, and which we wish to put on record: "*The teachers, indeed, have for the most part got no other training at the godless universities than that of the offal literature of the heathen classics, and, inspired with this, they have become adherents of the ancient paganism,* i.e., *despisers of Christianity of which they*

understand but very little (blutwenig)." * If a remedy for the dearth of priests is not to be found till the study of the classics is laid aside, we can only say that there will probably be a long time to wait; and scarcely could a more striking or more open description be given than that conveyed in the above extract of the flag under which the *Kulturkampf* is conducted. From this, too, a good idea may be formed of the stuff the boys trained in the seminaries must be made of, and yet it is these that Heiner desiderates to meet the needs of the church. In point of quantity we have no doubt they might be quite fit to do so.

Heiner further remarks that the inferior position of the chaplain who, in Bavaria, passes as the "slave of the priest" and is so esteemed, has an extraordinarily deterrent effect. Still more can this be said of the pecuniary position of the priests. "The bare incomes of the assistants to the clergy," says Droste, in his work "Fürsorge der Kirche," "are, unless in special circumstances, everywhere so small that only in few cases do they reach the wage of a common labourer or farm servant, to say nothing of their rising higher." The chaplains with a house of their own are much better off with £60; still, often enough they only draw £45, especially in Prussia. The income of priests in Bavaria is, according to Heiner, at least £100, usually £120, but in Prussia it is much smaller.

Finally, according to Heiner, the system of the State Church and the imposition of compulsory military service upon students of theology form one of the leading causes for the

* Heiner, page 63, mentions the following characteristic occurrence:— "Among the students who were leaving a Lower Franconian gymnasium for the university there was one who meant to study theology. To prevent this, his fellow-students subscribed to enable him to prosecute the study of political economy, and in fact they succeeded in their design of pronounced hostility to the Church, that not one of their number should become a priest."

dearth of priests, as the "ideal" of the profession cannot fail to have been thereby lowered in the public eye. We can more readily agree with him when he says that the ranks of the clergy would find far more recruits were they secured the influence and independence which the writer desiderates, and when he says further that confidence in the career would be greater if the *Kulturkampf* were ended. These factors, however, can scarcely be taken into account in explaining the phenomenon in question. The principal weight is to be attached to the causes previously assigned. The Catholic clergy are naturally recruited mainly from the lower classes. Considerable means are required, taking into account the increased cost of living, to procure the education. It is therefore very plain that the requisite number will not be forthcoming unless special facilities are afforded for the school period, especially as the material outlook is not a brilliant one.

II.—THE FACULTY OF LAW.

THE faculty of law comprises, as we saw, from a fourth to a third of all the students at our universities. Only at the beginning of the *sixties* the proportion in Prussia went strikingly down to 15·7 per cent., while for all Germany it still remained at 21·5 per cent. The highest percentage we observe in Germany was from the middle of the *forties* to the middle of the *fifties*, when the students of law formed 33·7 per cent. of the total number of students: in Prussia alone at that period the percentage was 31·4. That corresponds with the changes which at different times have taken place in the attendance at the faculty of law. At the Austrian universities the students of law form a far larger proportion of the students than they do in Germany. On an average of the ten semesters 1876-81 they formed 48 per cent. of all the

students. In the year 1871 the proportion went down to 37 per cent., but in the year 1861 it was as high as 51 per cent. The highest attendance for all Germany is, as was to be expected, at the close of the period under our consideration, the number of law students in the summer semester of 1883 being 5,426, the lowest figure was 2,381 in 1860; the increase, therefore, as between these two periods is 128 per cent. In this faculty, too, the flood time was the beginning of the *thirties*, or more correctly by the Prussian figures, the end of the *twenties* (1830-1, 4,551). By the middle of the *thirties*, however, the flood had abated (1836, 3,144; 1837, 3,705), but only to rise again very gradually till it reached its former height in 1852, when the number of students was 4,553. The ebb that followed this in the number given above for 1860 shows a far greater fall than in the previous period, nor was the lost ground gained back again till after the war of 1870-1. Since then the numbers have continued to increase down to the present moment, and in the ten years following, 1870-1, they were almost doubled.

Taking the Prussian universities by themselves, we find on the whole the same result, only with still sharper antitheses. As the returns for these universities go further back they may be utilized for the supplementing of what is given above. In Prussia the culminating point was already in 1828-9, when the number of law students was 1,641; in 1837 the number had already gone back to 951; in 1851-2 it attained its former height, 1,689; in 1860 it reached (like the rest of Germany) the lowest point of our whole period, 744; but in 1881-2 it had nearly tripled itself, the number then being 2,366.

It has happened more than once in Prussia that at the instigation of the Minister of Education cautions have been publicly given in the schools against entering upon the study

of law. This was done at the beginning of the *thirties*, of the *fifties*, and now again of the *eighties*. In the former periods the caution took very speedy and very great effect, and on the present occasion likewise we shall probably not have long to wait for the turn of the tide.

A better general view of the development is obtained by comparing the averages as set forth in the following table :—

LAW STUDENTS AT THE GERMAN UNIVERSITIES.

1830-31	4,472	1861-66	2,850
1831-36	3,672	1866-71	3,003
1836-41	3,179	1871-76	4,103
1841-46	3,407	1876-81	5,087
1846-51	4,029	1881-84	5,122
1851-56	4,157	1883-84	4,942*
1856-61	2,763		

From 1831 to '46 the change is but small: the following ten years again show a rise, which is followed by a serious fall. Since 1871 the increase is very remarkable and steady, but in comparison with population we are still a long way off the high-water mark of 1830-1, when the number of law students per 100,000 inhabitants was 15. By the middle of the *fifties* this latter number had fallen to 7·4, and at this it remained till the beginning of the *seventies*; since then it has remained steady at 11·5. Nor in proportion to the other faculties does the faculty of law, in spite of its large increase, occupy a more favourable position than in other periods. In 1830-1 it formed 28·3 per cent. of all the students; from '46 to '56 this percentage was as high as 33·7; in the latter half of the *seventies* it was 26, and at present it is 21·6.

[* This number is given as the total of the numbers of the law students at the separate universities, as shown on p. 129. For the summer semester of 1883 the author gives the total number at 5,426, whilst the addition of the numbers at the separate universities only gives 5,087. Probably the discrepancy is caused, as explained in a former chapter, by including in the larger number students who have finished their course but have not yet been examined.]

In Austria, also, the increase of late years has been quite as striking as in Germany. We find there in attendance at six, and since 1875 at seven, universities the following numbers:—

LAW STUDENTS IN AUSTRIA.

1841-66. Average.	1866.	1871.	1876.	1880-1.	1876-81. Average.
2,400	2,506	3,208	3,768	4,778	4,475

From 1841-66 the numbers experienced but little variation; but after the latter date there is noticeable an increase, which, as in Germany, has been particularly large since 1876. In proportion to population during the last five years, there have been nearly twice as many law students in Austria as in Germany. The proportion in Austria has been 20·4 per 100,000 inhabitants; still, among these there was a number of unmatriculated students.

To complete the figures given above, we shall not do more than group the universities, give the attendance at these groups, and then proceed to take a nearer view of Prussia.

	LAW STUDENTS AT THE			
YEAR.	Six Old-Prussian Universities.	Six South German Universities.	Three largest[1] Universities.	Six smallest[2] Universities.
1831-36	1,292	1,108	1,490	422
1836-41	1,008	1,095	1,293	390
1841-46	1,076	1,325	1,293	458
1846-51	1,399	1,600	1,597	466
1851 56	1,536	1,714	1,696	458
1856-61	973	1,057	1,224	310
1861-66	926	1,146	1,237	311
1866-71	1,100	1,073	1,419	263
1871-76	1,550	921	1,776	287
1876-81	2,079	1,238	2,506	372
1883-84	2,036	1,422	2,794	354

[1] Berlin, Leipzig, Munich.

[2] Greifswald, Kiel, Marburg, Giessen, Rostock, Erlangen.

The attendance of law students at the Old-Prussian universities follows on the whole that of the total number of students, only it has quite recently attained a preponderance. The law students at present form 40 per cent. of the whole, while from the middle of the *thirties* to that of the *forties* they only amounted to 31·6 per cent. It is chiefly Berlin which causes the difference.

The tendency to gravitate to certain centres for instruction, which is particularly strong among the law students, and which is open to less objection in that faculty than in the others, may be gathered from the growing percentage to be found at the three largest universities. In the most recent semesters these were attended by a half of all the law students, although no doubt these same universities at the end of the *sixties* had 47·4 per cent. of all the students, and in the *thirties*, 40·6 per cent. An increase of their influence is to be noticed since 1856; it is not, again, before 1866 that the decrease in the attendance at the very small universities comes strikingly into view.

The six South German universities have not undergone such striking fluctuations in point of numbers as the North German; this of course causes a greater variation in the percentages. In the *fifties* they had 41 per cent. of all the law students, but in the *seventies* they have only 22·4 per cent. In these figures we have expressed the rise at Leipzig and the falling-off at Heidelberg. From the following table (p. 129), which shows the distribution of the law students, we see that in the *thirties* and *forties* Berlin took the lead with an average attendance of over 500 students; then came Munich, in many semesters very near Berlin, even beating it considerably for a few years after 1848—in 1852, for example, showing 898 students for 620 at Berlin. After a long struggle Berlin found itself again at the head, while Munich

LAW STUDENTS AT THE GERMAN UNIVERSITIES.

YEAR.	Berlin.	Breslau.	Halle.	Greifswald.	Königsberg.	Bonn.	Göttingen.	Marburg.	Kiel.	Munich.	Würzburg.	Erlangen.	Tübingen.	Heidelberg.	Freiburg.	Leipzig.	Jena.	Giessen.	Rostock.	Strassburg.
1831-36	561	227	137	34	90	244	324	109	92	490	75	53	90	312	88	439	145	90	44	—
1836-41	496	116	87	12	74	223	274	94	94	427	74	75	117	314	88	370	129	77	38	—
1841-46	524	137	96	39	75	215	205	90	81	439	92	108	166	466	54	330	150	104	36	—
1846-51	572	235	144	40	120	295	234	76	54	638	171	152	179	409	51	387	120	109	35	—
1851-56	640	274	147	53	149	272	224	57	54	722	181	149	151	447	64	334	94	106	39	—
1856-61	476	152	75	32	86	151	170	37	53	451	133	94	76	274	29	297	81	46	48	—
1861-66	483	157	46	14	69	158	176	41	63	439	121	89	69	384	44	315	78	51	53	—
1866-71	589	168	55	24	91	172	158	28	31	418	124	68	78	337	48	412	81	52	60	—
1871-76	614	326	139	70	188	213	283	50	15	251	108	40	140	339	43	911	94	72	40	163
1876-81	1073	373	110	81	175	268	247	90	31	463	116	50	225	278	103	970	110	85	35	187
1881-84	1232	285	116	58	146	274	191	98	49	697	136	68	198	291	154	749	101	66	43	203
1883-84	1261	231	115	47	134	248	179	79	44	736	136	76	162	204	108	797	88	62	46	189

was gradually, but very considerably, losing in influence—there being in 1874 only 212 law students—and only quite recently it makes a considerable bound upwards. Leipzig, at the beginning of our period, took the third place. But in 1839 it was passed by Heidelberg, which in 1846-7 stood at the very top, showing 566 law students, as against 366 at Leipzig, 542 at Berlin, and 479 at Munich. In 1848, however, it fell back into the fourth place, and to the end of the *sixties* it continued to contest the third place with Leipzig. After the war of 1870 Leipzig makes an enormous bound upwards, and for a time surpasses even Berlin, which, however, in the most recent semesters has far outstripped all the universities. In the winter semester of 1881-2 it shows 1,441 students, while Leipzig shows 858, and Munich 612. At the present time Breslau comes next with 318; then Bonn, 251; Strassburg, 222; Heidelberg, 206, &c.

The number of non-German law students at German universities appears to have remained almost constant. In 1880-1 the average for two semesters was 167, or 3 per cent. of all the law students; twenty years earlier the corresponding number was 163, or 6·7 per cent.; and in 1835-6 it was 137, or 4 per cent. The figure is too unimportant to necessitate our taking any special account of it. We are to be understood, therefore, to be here reckoning constantly with the total number of students, foreigners included.

In no other faculty is attendance at several universities such an established institution as in this one, no doubt because among the law students the relatively largest proportion are well-to-do. The custom seems more recently to have extended itself, particularly in Prussia. Between 1876 and 1881 the native Prussians at Prussian universities make up 89 per cent., and in 1880-1 the Old-Prussians at Old-Prussian universities make up 87 per cent. In the same period we

find of Prussians at Prussian universities 89·3 per cent., or 2,232 out of 2,500, the number of non-Prussians consequently being 268. In the same period 853 Prussians studied at non-Prussian universities, *i.e.*, 27·7 per cent. of 3,103 law students, and of these, 402, or nearly the half, went to Leipzig alone. After Leipzig came Freiburg (winter, 125 : summer, only 30), which only recently exhibits the attracting influence formerly exercised by Heidelberg, Tübingen (s. s., 118 ; w. s., 50), Strassburg (73), then Heidelberg (67 and 47), Munich (71 and 56), Jena (62 and 44), Würzburg (27), Giessen (13), and Rostock (2). On the other hand, there were at Prussian universities in recent years about 15 Bavarians (of whom 14 were at Berlin), about the same number from Saxony, only 3 or 4 from Würtemberg, and from the rest of Germany an average of 182 in the two semesters of 1880-1. That makes altogether 215 non-Prussian Germans at Prussian universities, or 8·4 per cent., which can scarcely be regarded a very fair exchange. In 1860-1 the number of Prussian law students who studied *in* Prussia was 667 ; at the non-Prussian universities we may reckon about 123 ; at Göttingen, 14 ; at Marburg and Kiel, perhaps 1. This makes, in all, 138, or 20 per cent. of those who studied *in* the country ; while, in the same period, 8 from Bavaria, 2 from Saxony, and not a single one from Würtemberg studied law at a Prussian university.

It is of special importance to determine what average proportion of the students reach their goal, and pass the State examination which entitles them to an appointment in the Civil Service, how many from death, emigration, or from taking to another profession, do not come up to the examination, and how many of those who come up to the examination fail to pass. There are, unfortunately, almost insurmountable difficulties in the way of an exact investigation into these

points. In the first place, we have no exact knowledge of the number of the Old-Prussian students; to those who study at the native universities after the years of probation we can only make a percentual addition for those present at other universities, and when this is done we can only count on approximately correct figures. We are further not sure of what divisor to employ, in order to get the number of the students who ought, in the regular course, to present themselves at the examination.

The average course is assumed sometimes at six and sometimes at seven, and sometimes at still more semesters. Previous calculations have been made from six. At least one semester, however, is lost, more recently, at all events, by the larger number of the students who serve their military year during their university course; and the larger the percentage of those who fail in the first examination, the larger is the number of those who must continue their course beyond the normal length. Great differences here, of course, exist.

We have no returns on the first law examination: still, from the results of the second, we may argue to those of the first, although in the latter the examination is of a less stringent character.

Of those who were tested by the Immediat-Justiz-Examinations-Commission, there failed, according to the report of the Minister of Justice:—

1841-50,	average	25	per cent.
1851-60	,,	33·7	,,
1861-70	,,	22·6	,,
1871-80	,,	10	,,
1881	,,	15·6	,,

The more the supply exceeds the demand the higher the standard is raised. The smaller the supply, as compared with the demand, the more lenient are the examiners; but

it will scarcely be safe to assume the greater or less diligence of the students in one decade as compared with another as the cause of the different result of the examination. In the first half of the *fifties* thrice as many had to stand the great examination over again as in the second half of the *seventies*. If this was also the case with the first examination, a correspondingly larger number would have to go back to the university in the first period than in the second.

There are, further, among the law students, more of the wealthy class than among the students of the other faculties, and there is not, therefore, as a rule, so much necessity to shorten the curriculum. It is a generally recognised fact that in no other faculty do the students attend the lectures so irregularly, or fritter away so much time, as in the faculty under consideration—no doubt from the greater share they take in the activities of the corps—so that a larger percentage are obliged to study longer than the normal curriculum. We shall therefore have to reckon the average course here at six-and-a-half semesters at the lowest, or probably seven, as the number of those who hang long* about the university, and who spend eight and even nine semesters on their course, is not small.

A further difficulty meets us. An increase or a decrease in the attendance at the law faculty can only tell upon the number at the examinations after a series of years, as they cannot come up for their final examination till after their three years' course at the university, and an additional four years (at the lowest) practical preparatory training, *i.e.*, not till the lapse of seven years after they came to the university.

* ["Bemoosten Häupter" is the expressive phrase in the original. It is taken from the former club-life of the German universities. Along with the other names applied to students according to the length of time they had spent at the university, it is explained in Raumer, *Geschichte der Pädagogik*, vol. iv., p. 226.]

An approximate compensation for this can only be attained by taking a somewhat large average; in a smaller average it will be necessary to set over against the actual number at an examination the attendance of students for some five years previously.

For the twenty-five years, 1841-65, there appeared for examination before the Immediat-Justiz-Examinations-Kommission a yearly average of 297. For the same period the average number of Prussian law students was about 1,150. Putting back the period five years and taking the average for 1835-60, we find the number to be 1,105, which differs so little from the other that we may disregard the difference. On this basis, and assuming a course of $3\frac{1}{4}$ years about 350, or assuming 7 semesters as the length of the course, 330 law students should have finished their curriculum yearly, and if they have passed their examination and obtained the practical preparatory training for four years, the same number should appear for examination at the final test. Instead of this there were only 297—a falling-off on the one method of calculating of 53, or 15·4 per cent., and on the other of 33, or 11 per cent., which cannot be regarded as at all excessive. Of these, however, all did not reach their goal, but only 215, and 27·6 per cent., came short of it. The claim to a State appointment therefore was only gained by 61·4 per cent., or 65 per cent., according as we adopt one or other of the numbers of students given above; and 38·6 per cent. or 35 per cent. got other appointments, emigrated, or at least in one way or another disappeared—a proportion nearly corresponding to that which we found to exist among the students of theology (28 per cent.) when the longer preparatory course (four years as compared with one-and-a-half) is taken into account.

From 1866-80 a yearly average of 284 entered for the last examination, and of these 245 passed. The percentage

of failures in the last period has strikingly diminished—it is only 13·7. We shall now look at Prussia—the Prussia of the present day. From 1866-80 the average number of Prussian students of law was 2,120, and in the ten years 1866-75 it was 1,741. On an average of the 15 years, and assuming the course at 3¼ years, 652 finished their course, and on an average of the 10 years, 536. As against this, in the 15 years 284 were examined, or only 43 per cent. It will, however, be more correct to compare those who entered for the examination in the years 1871-80, 327, with the 536 students of the period 1866-75, and although the percentage of failures in this period was unusually small—290 on an average passed the examination—still no more than 54 per cent. of the students obtained the claim to a civil appointment. The inference from this seems to be that the average course is to be assumed as somewhat longer. Taking this at seven semesters, we should have 299 assessors to set against 490 law students who had finished their course, or nearly 60 per cent. The disproportion between these two factors is recently somewhat greater in the greater crowding into the legal profession. On the other hand it is not to be supposed that the course of study, in the case of the larger number of those who leave the study of law without passing the examinations, is lost for the State and for society; in times like these it is rather to be assumed that a large proportion of them find employment in commerce or in agriculture, in the military service, in the press, in the direction of companies, or in subordinate civil appointments—imperial or municipal—where their legal knowledge can stand them in good stead.*

*[The point of this apology seems to be that, as the Universities are State institutions and supported to the extent shown in Chapter XVI. by State funds, the State expects some direct return in the way of service from those to whose education it so largely contributes.]

The development is seen from the following comparison, in which, however, we again repeat that only an approximation to the number of the students could be given :—

	Law Students in Prussia.		Per 100,000 Inhabitants.	Examined by the Immediat-Just.-Ex.-Comm.		Passed.	
1866-70	1,322 (say)	=100	5·5	197 (say)	=100	154 (say)	=100
1871-75	2,160	163	8·7	250	127	227	147
1876-80	2,880	217	10·9	404	205	354	230
1880-81	3,095	234	11·3	596	303	503	326
1880-82	—	—	—	659			

In this way a striking view is obtained of the enormous increase which has recently taken place in the number of law students. The results are already apparent in the numbers who present themselves for examination. Since 1866-70 the number has been tripled, and the Examining Commission is no longer fit to cope with its work. In the year 1875, 344 were remitted to them for examination, of whom 88 remained unexamined; in 1880 there were 917, and in 1881, 1,142, of whom 437 and 524, or nearly the half, remained unexamined. This leads to an extension of the time during which the men are employed as Referendaries, and to an increase in the number of Referendaries, as this class is receiving constant accessions from those who pass the first examination.

At the end of the *thirties* there were 2,365 Referendaries and Auscultators;* in 1856 this number had increased to

* [Referendaries and Auscultators are thus distinguished:—AUSCULTATOR, zuhörer bei Gerichtsverhandlungen der nach beendeten academischen Studien das erste Examen für den praktischen Justizdienst gemacht hat. REFERENDARE, der über die bei einem Gerichtshofe eingegangenen Schreiben referirt, die Hauptpunkte daraus anführt und vorträgt. The threefold grade and the three examinations—*pro auscultatura*, *pro referendariatu*, and *pro assessoratu*—were peculiar to Prussia among the German States. Since 1866 Prussia has assimilated itself to the other States, and has now only the last two grades with the corresponding examinations. See Appendix, note 7.]

2,827, and by 1866 it had gone down again to 1,046. The following are the numbers since that date :—

1869-70	1,491	(say) =	100
1871-75	1,734		116
1876-80	2,971		199
1880-81	3,590		241

It thus appears that the Referendaries have been more than doubled since 1869, while there has been naturally only a slight increase in the number of official posts.

Hoffmann states that in his time, that is, at the end of the *thirties,* it was becoming more a custom to take the law course at the university—to pass for Referendary as well as for Auscultator—with a view to some offices for which such a course of education was not strictly required. This is, no doubt, at present more frequently the case ; the Referendaries do not by any means all look forward to State appointments as judges or civil servants. A comparison, however, of the Referendaries, as well as of the students with the official posts, will afford here also, as we saw was the case in the theological faculty, a convenient basis for judging whether an over-crowding—an over-production—exists in this branch of the service, and what meaning is to be attached to the fact.

Here, however, it is particularly to be observed that no exact estimate can be made for the present, to say nothing of earlier times, of the number of persons with a full legal training who are employed by the local authorities throughout the country. In this department we can only make an estimate, but the possibility of error is too small to give a wrong direction to our inquiry. The largest number of posts that fall to be considered belong to the administration of justice, and they are sufficiently well known.

The first statement we have of the judicial posts in Prussia, with a view to determine the yearly demand of men to fill them, is that of Dieterici for the beginning of the *thirties*. He gives the number of posts in the judicial branch of the service as 4,254, and in the administrative branch as 1,657, which is undoubtedly too high. This makes in all 5,911, and as he assumes the average length of service at 28 years, the yearly demand is 211. According to Hoffmann, who accepts Stark's figures, there were, for the end of the *thirties*, a considerably higher number, 5,115 paid and 168 unpaid judges. On the other hand, he supposes that the number of official posts beyond the judicial department, held by regularly trained lawyers, would probably be calculated at not far off 800. The total number of officials, therefore, falling under consideration would be about 5,915, just about the number given, while, including the unpaid magistracy, the number would be about 9,200. The addition of so many young Referendaries would materially lengthen the average period of service and demand a higher divisor. Assuming 32, we get as a yearly demand 287, to meet which, for the years 1837-9, Hoffmann gives only 280 as the number of law students who had finished their course. For the year 1868, in Prussia of its present size, the number of officials connected with the administration of justice was 6,845, and, including the general administration, the number of officials with a legal training was altogether about 8,000. According to the Government returns of 1880-1 there were 6,691 officials connected with the judicial administration. As to the officials with a legal training connected with the Government and the communes, we were again fortunate enough to secure the friendly aid of Privy-Councillor Blenck, Director of the Prussian Statistical Büreau. From sources accessible only to the Büreau, he estimates—of course with all reserve, and

states only as an estimate—that 1,460 may represent the number of the officials in question engaged in various branches of the public service in Hanover, in the railways, State and county administrations, &c. Among these, too, there are no doubt some who have not had the advantage of a complete legal training, but they will all have been for a longer or shorter period students in the faculty of law.

In addition to those mentioned, there are others connected with other branches of the public service, such as the Post Office, who have been transferred to these departments from the judicial service. There are some, further, engaged in the service of the communes—put somewhat too low, perhaps, at 260. Taking these three classes together, we should have in Prussia of its present size 8,411, or in round numbers 8,500 public officials with a legal training, which is certainly not too high an estimate.

Accepting these figures, we get the following small table applicable to Prussia of its present size :—

	Official Posts requiring a Legal Training.	Per 100,000 Inhabitants.	Per 100 Officials.		
			Referendaries.		Students.
1868	8,000	33·2	18·6	'68-70	16·5
—	—	—	—	'71-75	26·3
—	—	—	42·2	'76-80	34·3
1881	8,500	31·2	—	'81	36·4

Assuming the period of service at 28 years, and so, with Dieterici, putting the figure too high rather than too low, the yearly requirement would be for the two dates given 286 and 307 in Prussia of its present size. In the beginning of the *sixties* the yearly supply (273) exceeded the demand by about 35 ; but this surplus must have been pretty well used up in the latter half of the *sixties*, when the deficit reached the unparalleled height of 130 in Prussia of its present size. When a dearth of candidates exists for

a series of years and any existing surplus has been used up, the official posts must be administered only provisionally, or, as frequently happened in earlier times, be held by men who have not passed the second examination. Even at the beginning of the *seventies* the required number was not reached; there must still have been a deficiency of from 60 to 70. It was not before the latter half of the *seventies* that the demand was fully met; for about 300 fresh appointments there were then 354 candidates, and since 1880 the number of candidates has been over 500. The necessary result of this almost unparalleled overcrowding must be the raising of the standard of the examination; and, indeed, a diminution in the number of law students is a thing very much to be desired.

What a splendid chance there is here for undertaking a reform of the course of legal study! A four years' course has long been the aim of the reformer, and the introduction of this would render it possible to give political science its due by assigning it the place in the curriculum which it has long held in South Germany and Austria.*

In Austria the number of legally-trained officials was given by Schimmer in 1877 at 18,000, which would give 82 trained lawyers for every 100,000 of the population, whereas, in Prussia, including the Referendaries (probationers), there were in 1868 9,500, or 39·4; in 1880, 12,000, or 44 for every 100,000 of the population. If the number of students did not correspond with this large figure

* [The reform here proposed has been frequently considered in Germany. Each State may make the law curriculum as long as it pleases; none may make it shorter than three years. Proposals to enact a minimum of four years were rejected by the Prussian Parliament in 1869 and 1879. The same proposal was rejected in the Imperial Justiz-Kommission in 1876. The Commission was careful to explain that what was laid down by the law was only a minimum, but that this was a point which could not be left to the arbitrary choice of individual States.]

we should consider it as erring considerably by excess. For every 100 officials there were in 1880-1 26·5 students; in 1871, 17·7; in 1876-80, 21 (native Austrians only), which is considerably fewer than in Prussia of recent date (36·4). We saw above that in Austria there are 18·1 law students for every 100,000 inhabitants, and in Germany at the same time only 11. Assuming the period of service at 28 years the yearly demand in Austria would be 643. It is, however, more correct to assume the period of service here at 32 years, as in Austria all the law students who have passed the examination, and are in some way or other employed by the State, are included in the calculation. The yearly demand is thus brought down to 563. Taking the course at four years, as is customary in Austria, the normal number of students amounts to 2,572, or 2,250 students, according as we assume one or other of the above numbers and on the supposition of a loss of 25 per cent. to about 3,200 or 2,800 students. In Austria the number of law students is at present over 4,000, so that there also the overcrowding is considerable; and yet in the *sixties* the number required was scarcely reached.

III. THE FACULTY OF MEDICINE.

At the beginning of the period under present consideration the number of medical students was not so enormously high as that of the faculties previously mentioned, and the fluctuations are, on the whole, less marked. In the faculties of law and theology there was a rapid falling-off after 1830-1, and by 1835 the numbers had suffered a considerable diminution; in the faculty of medicine, on the contrary, the numbers went up from 2,505 in 1831 to 2,655 in 1835. The numbers then went back to as low as 1,610 in the year

1848 ; then follows an increase to 2,395 in the year 1853-54. The next ten years are steady; but from 1862 there has been an interrupted increase in the numbers—from 2,165 in 1862 to 5,280 in 1882 and 6,172 in 1883. In the last twenty years, therefore, the increase has been even greater in this faculty than in the faculty of law. The main upward bound in the medical faculty came later, and was still more marked. It has been mainly since 1878, when the number was 3,393, while in 1882 it was 5,280. In the faculty of law the corresponding numbers were 5,110 and 5,327. The larger averages also consequently differ considerably from each other.

	1830-31	1831-41	1841-51	1851-61	1861-71	1871-81	1881-84	1883-84
Medical Students,	2,503	2,434	1,886	2,211	2,626	3,612	5,693	6,350
Law Students,	4,472	3,358	3,738	3,460	2,926	4,595	5,122	5,426

The great falling-off in the middle of the *fifties* observable among the law students has nothing corresponding to it among the students of medicine. In the medical faculty there has evidently never been such a really alarming overcrowding as was experienced among the law students at the end of the *twenties* and the beginning of the *thirties*. The numbers for Prussia go farther back, and correspond in the main with those for Germany as regards fluctuations. In Prussia, as in Germany, the culminating point was reached later in the medical faculty than in the faculties hitherto noticed. Since 1861 the increase is quite striking; comparing the last half of the *fifties* with the last half of the *sixties*, the increase is 67 per cent.; and almost as great, again, is the increase in a comparison of '76-81 and '81-2, when it is 63 per cent.

In proportion to population, the number of students is smaller for Prussia than for all Germany. For every 100,000 of the population there were of students of medicine—

	1821-31	1831-41	1841-51	1851-61	1861-71	1871-81	1881-82
In Germany,		7·7	5·4	6·0	6·6	8·2	11·0
In Old-Prussia,	5·4	6·2	4·5	4·2	6·0	5·8	9·2

From these figures we may say that up to the last two semesters the attendance had been within moderate limits; there was certainly no reason to speak of any overcrowding in this faculty.

The number of students in Prussia from '21-46, or 25 years, was in proportion to population nearly as great in the twenty years '61-81; but considering the growth of prosperity and the largely increased demands upon medical assistance, the increase, although the dense population admits a larger employment of medical skill, cannot be said to have been as great as was to be expected. It is only in the most recent semesters that any considerable advance is noticed.

A comparison of these figures with the figures for Austria shows that in the Cis-Leithan States there are far more medical students in proportion to population than in Germany. There are at present medical faculties in Vienna, Graz, Innsbruck, Prague, and Cracow. In the last-mentioned a medical faculty was only introduced in 1848 and in Innsbruck and Graz only in 1865. At these studied—

	1841	1851	1861	1871	1876-81 (average.)	1880-81
Physicians and Surgeons,	1,715	2,040	1,298	2,789	1,779	2,056
Per 100,000 inhabitants,	9·7	11·2	6·7	13·4	8·7	9·2

The larger number, however, is to be attributed to the considerable accession of foreigners, among whom Hungarians must here be counted. If we confine ourselves to native Austrians the proportion is so much reduced that it falls behind that for Germany. As stated above, there are included in these numbers a large proportion of unmatricu-

lated students, who in '76-7 formed as many as 30 per cent., although in '80-1 only 14·5 per cent. of the total number of medical students. Of these, the precise number who were foreigners is not stated, although it was probably considerable. At Innsbruck, besides, the students of pharmacy are reckoned among the medical students, while in the other universities they are apportioned to the philosophical faculty. As may be easily gathered from the above figures, the fluctuations in Austria were even greater than in Germany. Here, however, it must be taken into account that in 1854 the favour was withdrawn which since 1849 had permitted qualified surgeons (Wundärzten und Chirurgen) to take their doctorate later on, and that in the middle of the *seventies* three institutions for surgical instruction were abolished and a new stringent regulation was introduced. In Austria, too, there was last year a bound upwards.

In 1880-81 there were 302, or 6·9 per cent., of non-German students of medicine at German universities, forming a larger percentage than was seen up to that date. Ninety-four of these were at Prussian universities; at Strassburg, 36 ; and at the other non-Prussian universities, 172. In the year '60-1 the corresponding number was 169, or 6·8 per cent. In Prussia, including the New-Prussian universities, there were 64 ; and at the remaining universities, 105.

The large numbers for Germany are not essentially modified by the foreigners, and still less so in the comparison of different periods.

The following table shows the distribution of the medical students :—

MEDICAL STUDENTS AT THE GERMAN UNIVERSITIES.

	Berlin.	Breslau.	Halle.	Greifswald.	Königsberg.	Bonn.	Göttingen.	Marburg.	Kiel.	Munich.	Würzburg.	Erlangen.	Tübingen.	Heidelberg.	Freiburg.	Leipzig.	Jena.	Giessen.	Rostock.	Strassburg.
1831-36	346	113	100	58	69	144	204	75	61	338	193	55	165	219	146	120	76	75	20	—
1836-41	390	128	120	66	72	136	201	42	51	196	143	53	126	149	114	145	72	70	20	—
1841-46	327	120	108	83	75	95	207	42	41	94	120	26	110	130	75	149	57	62	18	—
1846-51	225	88	90	79	55	103	189	49	35	149	145	43	174	116	60	152	59	71	16	—
1851-56	280	110	64	79	77	90	197	65	41	267	317	78	95	109	61	168	73	91	19	—
1856-61	298	119	45	128	97	108	162	62	35	133	239	80	103	113	52	182	56	96	23	—
1861-66	363	152	89	202	115	139	172	38	50	151	253	68	124	91	54	189	62	91	32	—
1866-71	423	188	126	262	120	192	150	112	57	213	268	75	146	77	49	210	69	64	37	—
1871-76	339	176	152	280	155	140	142	144	59	287	446	108	160	92	98	380	80	63	33	157
1876-81	425	205	135	249	136	140	132	122	88	378	431	102	158	109	182	395	86	61	38	162
1881-84	887	367	227	357	199	199	177	177	131	691	584	142	192	190	263	603	123	81	60	201
1883-84	1126	390	266	379	247	211	181	178	126	827	653	167	190	203	236	670	142	86	57	202

The non-Prussian universities have had recently a particular attraction for medical students, as we saw they had for students in the other faculties. Berlin, of course, has almost constantly had the largest attendance, although since '51 Würzburg has come well forward; indeed, from '51-6 and from '71-81 it had more medical students than Berlin. Greifswald and Munich make a considerable bound upwards after '61, while it is only since the end of the *sixties* that Leipzig, and only since the end of the *seventies* that Breslau, take a prominent place. In this faculty the preponderance of the large universities is not nearly so considerable as, for instance, in the faculty of law. There are, for example, at the present time only two universities with less than 100 students—Rostock 57, and Giessen 86—while Berlin, Würzburg, and Leipzig have, respectively, 1,126, 653, and 670. There are still, on the other hand, six faculties of law with less than 100 students, while the three largest faculties, as we saw, have from 638 to 1,200 students. Among the Protestant theological faculties there are seven with under 100 students; there is only one with over 550, and four with over 300. In the medical faculties, from '76-81, the proportion of the three smallest to the three largest is as 100 : 648; in the faculty of law, as 100 : 2,160; and in the Protestant faculties of theology, as 100 : 1,049. This, indeed, is no more than was to be expected in the circumstances, as at the small universities the medical student can make better progress in clinical lectures, laboratory-work, &c., and comes into closer personal contact with his teacher. In his work "On the Teaching and Study of Medicine at the German Universities" (Wien, 1876), Billroth maintains that at present, even with a course of ten semesters, the medical faculty is not able to train thoroughly more than 125 students, and, supposing a four years' course, only 100.

There are in the most recent semesters only five universities where this scale is not exceeded, while there are four where more than four times the number given have to be trained. In the works above-mentioned Dieterici and Hoffmann have for the medical faculty also compared the number of qualified practitioners with that of the students for the years 1834 and 1840. We shall carry forward the comparison for the period subsequent to these dates; and for this part of our work we have to acknowledge our obligations to some admirably arranged facts contained in an excellent paper by Dr. Guttstadt,* which appeared in the report of the Prussian Statistical Büreau for the year 1880. It has already been said that in the earlier part of our period a prominent place was taken by the surgeons, while these in our time take merely the position of second-rate practitioners, and find their occupation in the rural districts and in the small towns. It was not before 1852 that equal demands in the way of training and examination were made upon all medical practitioners, and the surgeons were allowed to die out. As compensating for this, however, the restrictions as to engaging in the medical profession were in 1869 removed,† and since then men who have passed no examination at all are permitted to practice as Heilkünstler [that is, to give medical advice in simple cases].‡

As indicating how important an element the surgeons formed in the supply of our medical practitioners in the earlier part of our period, it may be stated that in 1840 there were in Prussia 586 surgeons of the first-class, or 20·7

* Die ärztliche Gewerbefreiheit im deutschen Reiche und ihr Einfluss auf das öffentliche Wohl.

† "Seit 1869 ist die Gewerbefreiheit auch auf den ärztlichen Beruf ausgedehnt."

‡ [See Appendix, Note 8.]

per cent. of all practitioners with a full training; and 1,394 surgeons of the second class—in all, 1,980 who stood to the fully qualified practitioners in the proportion of 70 : 100. In 1876 there were in the old provinces only 145 surgeons, who formed 2·3 per cent. of 6,134 practitioners. In comparison with the students, the surgeons do not enter into the calculation, as in Prussia they were not matriculated, but they are taken into account in calculating our medical supply in proportion to population.

Dr. Guttstadt shows that at the present time in Prussia, of its former size, if we include the surgeons, there are not as many physicians to the same population as in the *twenties*. In 1825 there was 1 physician for every 3,001 persons; in 1849, for every 2,929; in 1852, 2,638; in 1861, 3,067; in 1867, 3,456; in 1876, 3,453; and in 1879, 3,349. Hoffmann complained of a dearth of physicians in his time: and this is a complaint for which at present there is still stronger ground, although the quality has essentially improved. The improvement is very striking if we consider only the physicians who have had a full academical training.

There was 1 fully qualified practitioner				in 1834	for every	6,000	inhabitants.
,,	,,	,,	,,	1840	,,	5,286	,,
,,	,,	,,	,,	1867	,,	3,456	,,
,,	,,	,,	,,	1879	,,	3,349	,,

Last year the proportion in Prussia of its present size was 1 : 3,171.

Let us compare this number with that of other States, also on the basis of Guttstadt's returns.

In BAVARIA there were in 1879 (including the army doctors) 1,773 physicians, or 1 for every 2,951 inhabitants. Bavaria is consequently more favourably situated than Prussia. It stood even better in 1858, when the proportion was 1 : 3,184. In WÜRTEMBERG there are comparatively

few physicians; in 1879 the number was 499, or 1 : 3,900. In SAXONY the surgeons play a conspicuous part; in 1841, out of every 100 medical practitioners only 43·4 were doctors, 14·3 were physicians, and 42·3 were surgeons.

In 1879 there are registered altogether, 1,002, or 1 : 2,924; while as far back as 1841 the number was 1,046; and in 1860, 970, or 1 : 1,652 and 1 : 2,262. The increase of population has followed too quickly; the number of physicians was not able to keep up with it, and hence the effort to raise the standard of the profession and to supply the place of the surgeons by more highly-trained men was made under serious difficulties. After 1847 surgeons, and after 1864 physicians, ceased to be trained for the profession. In the GRAND DUCHY OF HESSE there was in 1879 one physician for every 2,668 inhabitants, and in Baden one for every 2,781. In ALL GERMANY Guttstadt reckons on 13,144 practitioners, or one for every 3,403 inhabitants. But in that number there are still some surgeons. In CISLEITHAN AUSTRIA in 1877 one physician had on an average 2,854 persons to treat, or fewer than in Prussia. No doubt among those practitioners are some 40 per cent. of surgeons, so that an exact comparison cannot be made.

The suppression of the surgeons has made room for students, and it is only to be wondered at that it is merely in the last year or two that a general effort has been made to occupy this space. In comparison to population, however, a general increase in the number of physicians trained at the universities has taken place in the last decade, although not, we readily admit, in the most desirable way.

To proceed with our comparison.

Guttstadt gives the number of those who in Prussia

entered for the medical Staats-examen, and likewise of those who passed it for the period from 1862-79 :—

	Examined.	Passed.
From 1862-67	300	220 = 73·3 per cent.
„ 1867-70	407	299 = 73·4 „
„ 1870-75	435	326 = 74·9 „
„ 1875-79	328	260 = 79·2 „

The last period shows a large falling-off. As the medical curriculum is regulated at four years, although more recently four-and-a-half years will more certainly correspond with the average, we must go back a corresponding time in order to ascertain what percentage of the students reached their goal, and we must, besides, take larger averages. From 1866-76 (18 semesters) the number of Prussian medical students at native universities was on an average 1,438—*i.e.*, according to the year 1872-3, for which the proportion is fixed, about 80 per cent. of the entire number of Prussian medical students, who are consequently to be calculated at 1,800. Of these, on the supposition of a four-and-a-half years' course, 400, and on the supposition of a four years' course, 450, should have entered yearly for the examination. But from 1870-79 the average number was only 387, so that the deficiency amounted only to 3·25 per cent., supposing the one number, or 14 per cent., taking the other, either of which is strikingly small. The number of those who passed in the same period was 297. Guttstadt further gives the examinations at the eleven non-Prussian universities from 1873-9, so that for these six years we know the number of qualified physicians in Germany. There were on an average 613 yearly, corresponding to whom, going four years back, there were 3,137 German students of medicine. We may calculate, therefore, 784, or 697 candidates, according as we take the length of the course at four or four-and-a-half years,

and a consequent deficiency of 27·9, or 13·7 per cent. From these figures we also learn that a far larger proportion reach their goal in the medical faculty than in either of the faculties of theology or law, no doubt because the knowledge gained in this course is not so well adapted to carry its possessor over into another profession. Here, however, leaving the profession is customary only after passing the examination.

The period of service in the case of physicians Dieterici puts at 28, and Hoffmann at 30 years. The latter number, according to Caspar, must appear as too high, as in his opinion a greater mortality is even *a priori* to be assumed in the case of physicians than among clergymen. In the average number of 7,845 physicians in Prussia from 1867-79, on the assumption of a twenty-eight years' service, 280 young physicians would yearly be necessary to keep the profession up to its complement. There were, in point of fact, 207 to dispose of; these, however, have hitherto not only sufficed, but they have left room for a yearly increase of 73 at the present time. Excluding all waste by death or otherwise before the time of entering upon duty, a supply of 226 young medical practitioners has thus covered the waste in the profession by death, which, rather to our surprise, corresponds to a period of service of over 34 years. In this profession we have no unemployed stock to take the place of a reserve like the rectors and private tutors among the clergy. We must leave it to the medical profession itself to explain the phenomenon. We can only offer the remark that, as a general rule in the medical profession, an independent office is entered upon immediately at the end of the course, that is, about five years after passing the Abiturienten-examen, while in the legal profession it takes seven years to the passing of the last examination, and this period

is further extended a half or even a whole year by the examination itself.

From what has been said it follows that the attendance at the medical faculty in Prussia has for the period under consideration sufficed to cover the deficiency and to form a surplus of nearly 1 per cent.—*i.e.*, 1 per cent. more than the growth of the population demanded. There are, as we saw, in Prussia about 1,800 students, or 23 for every 100 practitioners; while for the 13,144 practitioners of all Germany in the year 1879, the average number of German medical students for the last ten years was 3,360, or 25 for every 100; but in 1881-2 the number was 35. If we may apply our observations for Prussia to the case of all Germany, we should say that, if hitherto an advance of 1 per cent. of medical practitioners on population has been possible, it may well at present be 1·4 per cent. If, finally, we take the numbers of medical practitioners which we have found for the years '60-1, '72-3, and '81-2 in the separate German States, and compare them with the numbers given by Guttstadt, we get the following figures, which, however, are to be received with caution, as only approximately correct :—

	Prussia.				Bavaria.			
	Physicians.	Med. Stud.	Studs. per 100 Physicians.	Studs. per 100,000 Inhabs.	Physicians.	Med. Stud.	Studs. per 100 Physicians	Studs. per 100,000 Inhabs.
1860-61	6,023 (old size.)	921	15	5·0	1,511	264	17	5·6
1872-73	7,660 (pre. size.)	2,088	27	8·3	1,675	536	32	11·2
1881-82	8,413	2,790	33	10·2	1,833	496	27	9·3
	Saxony.				Würtemberg.			
1860-61	970	86	9	3·9	?	86	—	—
1872-73	990	85	8	3·2	477	85	19	4·8
1881-82	1,009	166	16	5·6	499	166	33	8·4
					Baden.			
				1872-73	532	88	16	6·0
				1881-82	560	131	23	8·3

Taking a general view of the foregoing fact and figures,

we see that for the period under consideration there has been no felt want of students in the medical faculty, and that on the whole the inclination to the medical curriculum has gone hand in hand with the general increase in numbers, although the fluctuations were not so marked in this faculty as in the others. In the most recent period the increase followed later than in the total number of students, but it was strikingly large when it came. No doubt we see in this the renewed interest in the science which of late years has been stimulated by the great advances, especially in surgery, which the science has made. In view of the great increase in the number of students, account must likewise be taken of the fact that the places of the old surgeons have still to be supplied, especially in the small towns and rural districts. In such places a more lucrative practice can be formed and in a shorter time by men who have no fear of hard work, and who at the same time are willing to renounce the higher intellectual stimulus found at the large centres.

In view of the most recent facts and figures, however, we cannot quite agree with Guttstadt in his conclusion "that the prospects of the population as regards medical attendance are not favourable," and although we agree with him in thinking the opening up of the medical profession* as utterly bad, we can find in the above figures no argument against it. Nor do our lists at Halle afford any support for his contention that the physicians themselves show less inclination than formerly to enlist their sons in their own profession. The opposite, in fact, is the case. In recent years, of the sons of medical practitioners who studied at Halle fully a half were students of medicine, whereas in the *fifties* the proportion was only 32·7 per cent., and at the beginning of the *seventies*, 46·9 per cent.

*[That is, the extension to the medical profession of the Gewerbefreiheit.]

From what has been stated, however, we may learn that the study of medicine has not increased correspondingly to the importance of science in our time; nor can the attendance at the medical faculty be at all regarded, as has been supposed, as a measure of the interest felt in nature. The increase in the percentage of medical students at the universities is inconsiderable, and is satisfactorily enough explained by the suppression of the surgeons, and by rendering attendance at the university compulsory upon all intending physicians. As yet, at anyrate, and it is important to observe this, there is no overcrowding in the medical faculty.

IV. THE FACULTY OF PHILOSOPHY.

THE philosophical faculty, as above explained, presents at once the greatest difficulty in our present inquiry, and comprises the most numerous sources of error. It holds an exceptional position, and has in course of time, as previously shown, gained steadily in importance within the university. To have a general view of it we have simply to class together all the subjects which find no place in the other three faculties: even the students of political economy are included in it, and that, too, in places where there is a special faculty of political science. In this faculty, accordingly, there is seen an enormous increase, not only absolutely, but even relatively to the other faculties. In explanation of the phenomenon we refer particularly to what was said in speaking of the faculty of theology. "Our older contemporaries," says Hoffmann, "still remember the time when every student, as a rule, belonged to one or other of the faculties of theology, law, or medicine. No doubt they all took advantage, and in some cases more extensively than at present, of the

training in philology, philosophy, mathematics, and science offered by the philosophical faculty as the basis of all true study; but, at the very beginning of their academical life, they announce the intention of utilizing this course as merely preparatory to entering one of the three higher faculties. The masterships in the gymnasia and other respectable city schools were everywhere held by probationers. Many of these, too, did not regard their posts merely as stepping stones to clerical appointments, but they were very frequently men who, besides observing the customary form of studying theology, had taken with special predilection to classical literature, to history, to mathematics, or to physics, and had no intention of ever performing clerical duty." The number of students of theology, therefore, must appear greater, *i.e.*, as entered in the official lists, than it really was, and, conversely, the number of students of philosophy smaller than it was. Many also, who afterwards became botanists, zoologists, &c., passed as students of medicine; these are now all entered in the philosophical faculty. "Even those," says Hoffmann, "who had no eye upon any public office, or upon gain from legal or medical practice, but who only sought at the university a liberal education, had themselves enrolled as students of law or medicine." Hoffmann wrote this at the beginning of the *forties*, and even then a change on the practice mentioned had taken place; but, as he shows, some relics of the practice still existed, and they only gradually disappeared in the following decades.

In the *forties*, on the other hand, the number of students of political economy in Prussia and other places—apart from Würtemberg—was larger than afterwards, because from them a considerable number of the higher public servants were drawn; for example, the Relief Commissioners' posts, which later on were partly discontinued and partly filled with

students of law; students of agriculture, too, were enrolled under this class; still the number studying political economy—apart from Würtemberg—never formed a high percentage of the philosophical faculty. From all this it follows that since 1831—and still more is this the case the farther we go back—the philosophical faculty, in point of attendance, was bound to gain in importance, altogether apart from the development of the sciences in question. In this faculty, therefore, no falling-off, as in the other faculties, is noticeable since the beginning of the *thirties*. A steadiness rather is observable, with certain moderate fluctuations, to the end of the *fifties*, and then there is a steady increase to the present time—latterly, indeed, as much as fourfold. The same thing is to be observed in the Old-Prussian universities, where from 1820 to the end of the *thirties* the number was nearly doubled, and the falling-off remained only unimportant and temporary. The following table (p. 157) shows the development in all the universities together, as well as in separate groups, and indicates that the increase was general. Similar influences, therefore, must have been at work throughout all Germany.

Only the six South German universities in this respect are strikingly behind. In the *thirties* they have about 40 per cent. of all the students of the faculty of philosophy in Germany; in the *seventies* only 20 per cent., and in the latest semesters only 19 per cent. At Tübingen and Munich the philosophical faculties held a very prominent position, and more recently they have not increased like those of the sister universities. At the three largest and at the smallest the development was equally striking.

PHILOSOPHICAL FACULTY.

YEAR.	Total Number at the German Universities.	Proportion to 1831-6.	Per 100,000 Inhabitants.	Total Number at the seven Old-Prussian.	Proportion to 1831-6.	Per 100,000 Inhabitants.
1831-36	2395	100	7·7	891	100	6·5
1836-41	2793	116·2	8·4	1028	115·4	7·2
1841-46	3131	130·7	9·1	1184	132·9	7·6
1846-51	3080	120·6	8·7	1129	126·7	6·9
1851-56	2819	117·7	7·9	1155	129·6	7·0
1856-61	3525	147·2	9·4	1563	175·4	8·7
1861-66	4403	183·8	11·3	2206	247·6	11·5
1866-71	4631	193·3	11·4	2355	264·3	11·8
1871-76	6031	241·8	14·0	2461	276·2	11·7
1876-81	8197	338·9	18·1	3592	403·1	16·1
1881-84	9433	393·2	20·7	4284	480	19·2
1883-84	9501	396·7	21·0	4252	477·1	19·0

Grouping the universities as formerly we find

YEAR.	At the six South-German Universities.*	Proportion to 1831-6.	At the three Largest Universities.†	Proportion to 1831-6.	At the six Smallest Universities.‡	Proportion to 1831-6.
1831-36	977	100	1011	100	235	100
1871-81	1456	148·9	2849	281·8	753	320·4
1883-84	2002	204·9	4014	397·0	961	408·9

In comparison with the population the increase has been as much as threefold, and no less in Old-Prussia than in all Germany. At the Old-Prussian universities, however, it does not appear specially striking till the *seventies*, while in the rest of Germany it comes strongly out at the end of the *sixties*. The increase further has been strongest all over

* Munich, Würzburg, Erlangen, Tübingen, Heidelberg, Freiburg.

† Berlin, Leipzig, Munich.

‡ Giessen, Erlangen, Rostock, Kiel, Freiburg, Greifswald.

since the middle of the *sixties:* In all Germany, for the period 1871-76 to 1882-83, the increase was 57 per cent. and for the Old-Prussian universities, 77 per cent.

Taking a closer look at the individual universities as exhibited in this table, we see that in the *thirties* and *forties* Munich with 515 and 640 students in the philosophical faculty stood considerably in the front of all the other universities. Even in the *fifties* Berlin, with 490 students in the philosophical faculty, does not come up to Munich with 533; while Leipzig with, as yet, fewer than 160 students in that faculty, came behind Breslau with 220, Bonn with 249, Tübingen with 216, and could only compare with Münster and Würzburg. It is only since the *sixties* that Berlin takes the lead and keeps it at an increasing distance. Several of the universities had long an astonishingly small number of students. Down into the *seventies* the philosophical faculty at Rostock and Kiel was almost constantly attended by under 30 students; Erlangen was not much better attended, nor was Freiburg, which could only show larger numbers at the beginning of the *thirties.* Since the middle of the *sixties* an uninterrupted increase is observable at all the universities. If we compare periods of ten semesters and take in each case the last of the ten, Münster is the only one that shows any considerable falling off, while the numbers fluctuate at Würzburg. Rostock is the only university that last semester had under 100 students in the faculty of philosophy; Erlangen in '81-2 was still in that position, but several of the smallest universities such as Marburg, Kiel, and Freiburg have taken a considerable start upwards.

The following table shows the distribution of the matriculated students in

The Philosophical Faculty.

Year.	Berlin.	Breslau.	Halle.	Greifswald.	Königsberg.	Bonn.	Münster.	Göttingen.	Marburg.	Kiel.	Munich.	Würzburg.	Erlangen.	Tübingen.	Heidelberg.	Freiburg.	Leipzig.	Jena.	Giessen.	Rostock.	Strassburg.
1831-36	380	132	68	26	93	118	74	113	55	20	447	87	30	232	84	97	184	51	88	16	—
1836-41	467	122	68	84	120	105	62	122	64	27	582	135	30	261	89	42	204	72	115	22	—
1841-46	547	163	73	63	122	136	80	104	59	23	613	176	20	317	96	21	207	104	198	9	—
1846-51	467	161	71	44	99	177	110	116	64	25	666	152	22	254	86	42	217	125	171	11	—
1851-56	476	155	60	55	71	183	155	141	57	20	494	149	34	232	57	21	172	139	135	13	—
1856-61	503	284	119	82	85	275	215	195	75	29	572	180	52	199	104	53	150	172	163	18	—
1861-66	740	372	242	104	151	327	270	228	95	33	560	162	41	229	174	38	226	207	186	18	—
1866-71	882	365	339	109	178	260	222	323	116	29	492	139	35	167	161	47	464	133	158	12	—
1871-76	816	394	457	131	204	263	196	487	158	50	528	202	101	185	201	64	1011	166	168	34	215
1876-81	1413	566	524	157	353	384	195	511	235	99	657	241	130	273	232	98	1272	222	178	65	312
1881-84	1925	604	630	159	374	407	185	533	370	135	745	202	111	403	280	180	1294	225	238	87	349
1883-84	1946	579	630	167	364	410	168	529	353	136	771	213	124	401	283	210	1297	228	250	86	368

But not much, after all, can be learned from the total of the philosophical faculty, containing as it does a collection of heterogeneous subjects—represented naturally in different proportions at different times. The farther we go back we find the official lists, unfortunately, the more unreliable and incomplete, and in fewer and fewer cases accordingly are we able to fix accurately the percentage of the students according to the subjects studied. The numbers adduced, however, are large enough to serve us as a standard for the total number of students. In what follows the students of pharmacy are regularly taken into the calculation. The faculty of political science, again, at Tübingen is excluded, which, as a matter of fact, comprises subjects mainly connected with the faculty of law. This is not as a rule the case at the other universities, including the Bavarian, which are attended by very few students of political economy. In the following table we present as the average of a winter or a summer semester the percentages of the attendance at the different subjects taught in the philosophical faculty:—

	Total.	Philosophy, Philology, History, Science, and Mathem.	Political Economy and Rural Economy.	Forestry.	Pharmacy.	Technical Subjects, Mining, &c.
1841	2,676 : 100	1,826 : 68·2	282 : 10·5	168 : 6·3	268 : 10	127 : 5
1851	2,846 : 100	2,047 : 73·8	239 : 8·7	44 : 1·6	341 : 12·0	109 : 3·8
1861	3,800 : 100	2,725 : 71·8	377 : 10·8	55 : 1·4	457 : 8·9	153 : 2·9
1871	4,538 : 100	3,662 : 83·4	335 : 8·4	26 : 0·6	479 : 10·7	38 : 0·9
1881	8,562 : 100	7,228 : 84·4	510 : 5·9	168 : 1·9	636 : 7·4	21 : 0·24

The numbers deserve careful consideration. Change in a variety of ways has doubtless taken place, but it is not of a kind that the round total should not let us observe the main result. The real kernel of the faculty—the study of philology, philosophy, and science—has, in course of time, gained in importance, while the students in special departments, such as forestry, mining, &c., have rather gone off to

special forestry and mining schools. Only in very recent times the opposite tendency is here and there visible with regard to forestry, as at Munich and Tübingen, where there is at present a considerable number of students of that subject. This increase has been caused by the suppression of the forestry school at Hohenheim and its transference to Tübingen. Giessen was long the only university at which there was any considerable number of students of forestry An exact distinction, unfortunately, cannot be drawn between the students of political economy and the students of agriculture. As a probable result, however, we may say that the percentage of students of political economy has gone down from 7 per cent. in the year 1841, to 4·8, 5·2, 2·5, and 0·7 per cent. in the following decades till 1881. The percentage on the other hand of students of agriculture has kept pace with the general increase for the last three decades, and shows a little increase as compared with the first two. The numbers are—3·5 (1841), 3·9, 5·6, 5·9, and 5·2 (1881). The number of students of pharmacy shows a considerable absolute increase, but relatively it remains behind the total number in the philosophical faculty. Looking at the table as a whole, it is clear that the increase of the attendance in the philosophical faculty is caused not by the subsidiary but by the principal branches of study.

Here, however, we must make a second distinction between two great classes of subjects. Reckoning in one class the students of philosophy, philology, and history, and in the other students of mathematics, science, and geography, which last is here and there forcing its way in as a special subject of study, we notice a decided advance in favour of the latter. In the following tables we give the absolute numbers which we were able to collect, the number of

universities taken into account and the relative percentage :—

Year.	Number of Univ.	Phil. and Hist.	Science and Math.
1841	13	839 = 86·4	132 = 13·6
1851	12	1306 = 80·1	333 = 19·9
1861	15	1883 = 82·1	411 = 17·9
1871	19	2807 = 76·8	846 = 23·2
1881	20	4546 = 62·9	2682 = 37·1

Taking the percentage of the separate classes for particular years from the total number of students entered in the philosophical faculty as a standard for the separate decades, and thus reckoning the increase in these—a process in which there need be no great error—we find as follows :—

Year.	Phil. and Hist.		Science and Math.		Subsidiary subjects. Phar., Pol. Ec., &c.		Total Ph. Fa.
1836-45	58·9	1797 = 100	9·3	290 = 100	31·8	964 = 100	3051 = 100
1846-55	56·1	1686 = 94	17·7	532 = 183	26·2	788 = 82	3006 = 98
1856-65	58·9	2334 = 130	12·9	511 = 176	28·2	1119 = 116	3964 = 130
1866-75	64·0	3412 = 190	19·4	1034 = 356	16·6	885 = 91	5331 = 169
1876-81	53·1	4310 = 240	31·3	2540 = 876	15·6	1257 = 130	8107 = 266
1881-84	50·5	4769 = 265	31·8	3000 = 1034	17·7	1678 = 171	9433 = 319

These numbers form an excellent measure of the enormous importance which science has gained during the last decades in the whole development of our culture. It is probable, too, that the universities were late of feeling the influence in their attendance, as many technical schools were brought into existence, especially at the end of the *sixties* and the beginning of the *seventies*. Instances of this were seen at Munich, Brunswick, Darmstadt, and Aachen; while those already in existence exercised even in the *fifties* an increasing attraction through the excellent instruction obtained at them, such as those at Karlsruhe ('58-63, 819 scholars), at Hanover (449), at Zürich (485), and Berlin (764). With merely a business career in view, only a relatively small proportion

of those who used to take a thorough course of science even yet attend the universities. The increase is partly to be ascribed to the greater demand for trained teachers of science, caused by the recent development in the instruction at the gymnasia and by the increasing importance of the Real schools and the Trade schools. But we shall see that this demand has increased only in the same proportion as the demand for university-trained teachers in general. Students of science, however, are classed along with students of mathematics; the latter largely undertake the teaching of both subjects, and their number has been greatly increased compared with former times at the individual schools. Complaints about overcrowding have recently been heard among the teachers in question, but unfortunately the facts before us do not supply a sufficient basis for a separate treatment of the subject.

In forty years the number of students of science has increased tenfold; the students of philology and history have not yet been tripled. In this, no doubt, we strikingly see the tendency of our time, the intense interest in nature. It is, however, not to be forgotten that a large proportion of the number given have no share whatever in this special interest, but are attracted merely by the definite conceptions of mathematics—a branch of study for which the Semitic race is eminently gifted, and to which it is specially inclined. But to prevent the forming of false conclusions on the tendencies of our time, it is further to be observed that the study of philology and history has grown more in favour during the period in question than the study of medicine.

The development in Prussia, taken separately, being the same as in Germany as a whole, we need not spend further time on this part of our subject.

Desirable as it is again to compare the number of students

with those who go forward to the examinations and with the public officials appointed on the ground of these examinations, this cannot well be done with any exactness. The individual classes at the university are not, and indeed cannot be strictly distinguished, and we are not in a position, therefore, to make a sufficiently homogeneous comparison. It is particularly difficult in this faculty to pick out the Prussians studying particular branches; nor have we, except for the most recent period, succeeded in doing so with any exactness. We have made an estimate, however, which may be taken as giving normal numbers near enough to the truth; and in the following table, which contains at once the number of teachers who have passed the examination and the number of masterships, we present the figures for Prussia as they are given in the general report of the Education Department:—

Prussians at German universities.				Passed the Examination for the *Facultas Docendi*.					Teaching Posts in higher Schools in Prussia.
Year.	Total of the Phil.fac.	Phil. and Hist.	Science and Math.	Phil. and Hist.	Science and Math.	Relig. and Hebw.	Modern Languages.	Total.	
1841-51	984	566	133	55	19	6	5	85	—
1866-71	2800	1700	580	197	59	33	22	311	3805
1875-80	4409	2513	1309	234	97	28	66	425	5293
PERCENTAGE.									
1841-51	100	57·7	13·5	64·7	22·4	7·1	5·8	100	
1866-71	100	60·7	20·7	63·3	19·0	10·6	7·1	100	
1875-80	100	57·0	29·7	55·1	22·8	6·6	15·5	100	
INCREASE SINCE 1841-51.									
1841-51	100	100	100	100	100	100	100	100	
1866-71	284	300	436	358	311	550	440	366	
1875-80	448	444	976	425	511	467	1320	500	

A comparison may be made between those examined in the department of philology and the students of that subject if we include the students of modern languages. With the students of science, however, this is not possible, as many of these wish, as above said, to turn their learning to practical account in business. A comparison of these shows that this number has steadily increased. Those who have passed the examination in philology, history, and modern languages, formed down to the latest period an increasing percentage of those studying these branches, but the contrary was the case among the students of science.

	'46-51	'66-71	'75-80
Percentage of students examined in philology, - - -	10·6	12·9	11·8
Percentage of students examined in science, - - -	14·3	10·2	7·4

The large decrease of the proportion in the second line indicates a corresponding increase among the students of those who study with a view to business.

In Prussia the number of masterships in the higher schools for university-trained men has very largely increased, considerably more so than the population; and in this we have a clear indication of the fostering care of the Prussian Government for its higher education. Assuming the average period of service of a schoolmaster at 30 years, we find that, to supply 100 vacancies, from '67-70 there were 155 men examined and supplied with the *facultas docendi;** from '71-75 the number was 151, and from '75-80 it was 131. The supply was unquestionably sufficient for a still further increase in the number of teachers; but in the last period the surplus was not so great as in the preceding ones. Some

* [See Appendix, Note 9.]

such increase, however, is necessary, as the number of schools still comes short of our requirements; complaint, too, is general about the overcrowding of the classes, and attendance at the higher schools is growing faster than population. From '68-73 the number of teachers trained at the universities for the service of the high schools showed an increase of 19 per cent, and from '68-79 an increase of 39 per cent. In the same periods the number of those provided with the *facultas docendi* shows an increase of 23 and 36 per cent—not so large an increase in the last period as that of the number of teachers. Down to the year 1880, therefore, the supply could not be said to be excessive.

Comparing the students of philology, &c., separately with those who had chosen as the principal subjects of examination philology and history, modern languages, religion and Hebrew, we find that on the assumption of a four years' course 154 students should have yearly been ripe for examination; and taking, as above explained, a period later—from '51-66—there were 114 supplied with the *facultas docendi*, or 74 per cent. From '66-75 the number of the former was 452, and that of the latter from '71-80, 332, or 71 per cent. The deficiency, therefore—26 and 29 per cent.—corresponds very much with that among students of theology, viz., 28 per cent., although recently it has been perhaps rather less, as the length of the time during which the names stand among those of matriculated students has, by the long continuance of the examinations, been considerably extended over four years; and hence the divisor of the number of students would be correspondingly higher.

The modern languages have steadily gained in importance. It is these which have really caused the increase in the

attendance in the philosophical faculty, and in that faculty the increase of the number of students of philology. In the earlier decades the students of philology who took the modern languages were 6, 10, and 7 per cent.; of those entering for examination, they were in the two quinquennia of the *seventies* 11·8 and 15·5 per cent. This tendency was encouraged by the admission of the students from the Real-schools to this branch of study, and it will certainly tell with still more effect in the following years.* The number of students of philology who take the modern languages has increased thirteenfold since the *forties*—although it must be observed that even at present the number is not great—while in the other branches the increase has only been five-fold. Whether the demand has grown in the same way as this supply is a point we cannot determine.

In Austria, as we saw, the philosophical faculty took rank with the other faculties much later than in Germany. In the *forties* we find it in Schimmer represented merely by the students of pharmacy. The rest of the philosophical students stood on a level with the youth in the highest class of the gymnasia. In 1851 (besides the students of pharmacy) there were 593 students in the philosophical faculty.

The following shows the development of the philosophical faculty in Austria—the percentages being of the total number of students :—

* Of all the abiturients who left the Prussian Real schools the following percentages went to the university :—

1873-5	21 per cent.
1876-8	43 ,,
1879	49 ,,

That made for the last-named year 12 per cent. of all the abiturients who went to the university.

	1851	'61	'71	'76	'81
Philosophical faculty (Austria)	13·4	16·9	20·1	26·2	18·9
Percentage of students (Germany)	23·2				40·3

In Germany there were in the *fifties* 9 students of philosophy for every 100,000 inhabitants; in Austria, 4 (inclusive of students of pharmacy); in the *sixties* 4·7, from '76-81, 9·9; but of native Austrians only 8·1 as against 18 in Germany.

CHAPTER X.

THE MATRICULATED IMMATURI.*

THE universities have always shown themselves liberal in opening their lecture-rooms to such as were not able to satisfy the usual demands in the way of previous training, and who could not therefore be admitted to the state examinations—the usual goal of all regular students. The relation of the universities to the students who do not take a regular course of study has not been the same in all cases, nor is it at present the same, as we saw in the beginning of our present treatise.

In the case of foreigners a strict demand was not generally made for proof of a definite previous training, and those who came from German states other than that in which a particular university was situated were treated as foreigners. But even among the native students the matriculation of a number of *immaturi* was allowed; and we saw above that in some universities this practice went to great lengths, while others, more exclusive in this respect, refused to permit such to matriculate, but enrolled them among the unmatriculated students, that is, gave them permission to attend the lectures while refusing them recognition as members of the university. No very broad distinction therefore can be drawn between the matriculated immaturi and the unmatriculated students when the total

* [That is, students who did not take the full course at the gymnasium, or who did not pass the Abiturientenexamen.]

numbers attending the German universities and the different periods are taken into account. The transition from the one to the other is very gradual: here they appear as unmatriculated, there as matriculated students, as we showed above in the case of the students of pharmacy and surgery. Besides the last-mentioned there belong to this class a portion of the students of political economy, of agriculture, of veterinary surgery, dentistry, manufacturers, merchants, artists, &c.

The number of the immaturi who were matriculated is unfortunately only specially mentioned for Prussia since the year 1855, and even there of course the list includes only native Prussians. It might have been possible to form an estimate for the other universities by confining ourselves mainly to those classes of students who usually do not possess the full previous training, but as these classes did not in all cases permit of exact distinction, and yielded no reliably precise results, we have, after many attempts to include them, left them out of account.

In the following short table we give the immaturi, including the students of pharmacy, who as above-mentioned were not matriculated till '73-4—

IMMATURI INCL. STUDENTS OF PHARMACY AND DENTISTRY.

Year.	Berlin.	Bonn.	Breslau.	Halle.	Königsberg.	Greifswald.	Göttingen.	Marburg.	Kiel.	Total.	Six South German Univers. total.
1856-66	143	29	94	31	17	6	31	19	6	376	319
1866-76	131	51	72	135	26	42	90	63	8	618	457
1876-81	194	66	119	142	42	38	84	100	14	799	601
IMMATURI EXCL. STUDENTS OF PHARMACY.											
1856-66	38	24	34	27	5	5	—	—	—	123	122
1866-76	59	27	30	116	13	21	101	54	9	430	261
1876-81	131	44	73	119	25	20	58	57	9	536	412

The immaturi formed the following percentages of the total number of students and of the philosophical faculty at the nine Prussian universities—

Year.	Incl. Studs. of Pharm.		Excl. Studs. of Pharm.	
	p. c. of Studs.	p. c. of Phil. Facul.	p. c. of Studs.	p. c. of Phil. Facul.
1856-66	6·4	19·2	2·1	6·1
1866-76	8·7	22·0	4·8	12·0
1876-81	8·6	18·8	5·7	12·6

With these figures before us it is impossible to deny that the philosophical faculty is tolerably heavily burdened with subjects that are not quite homogeneous with those that originally constituted the faculty. This of course is the case in unequal proportions at the different universities. In Halle in the last period the students in question form 27 per cent. of the philosophical faculty. In Berlin they form 14, in Breslau 21, and in Bonn as many as 34 per cent. Leaving the students of pharmacy out of account, they form the following percentages in the universities mentioned—Halle 23, Berlin 9, Breslau 13, and Bonn 11. It is the Agricultural Institutes which so considerably swelled the number of the immaturi at Halle, Breslau, and Bonn. We do not think, however, that the level of the instruction is lowered for the rest of the students through the attendance of those with less perfect previous training; and, besides, the subjects we are here specially considering—science and political economy—are reasonably considered intelligible to any fairly educated person in possession of his faculties, and such the matriculated immaturi are supposed to be. Exceptional cases no doubt sometimes occur, but they receive no consideration.

We shall now take a glance at the particular classes of which the matriculated immaturi are composed.

A.—STUDENTS OF PHARMACY.*

We have repeatedly had to take notice of the students of pharmacy as introducing irregularities into our numbers.

In the treatise above mentioned Guttstadt has stated the numbers from '61-79 with great correctness. We have accepted these and supplemented them from the figures we have ourselves collected for the earlier and the more recent times. Till the beginning of the *fifties* the numbers for some universities, and, therefore, for the totals, can make no claim to complete correctness. At the earlier dates the lists take no special note of this class of students, and we have no certainty that, where they are altogether wanting, they are not given under some other heading, or that, in our own examination of lists, some have not been overlooked. On the whole, however, the impression given will be a correct one.

The first thing that strikes the eye on this table is the large increase since 1871, which continued growing till the end of the *seventies*, and even down to the last semester. Nor is there, again, any appearance of the fluctuations which we found to exist among the rest of the students: the increase has been a steadily growing one.

The number of apothecaries' shops in Germany is calculated at 4430. Assuming that the possessors of these hold them for an average of 28 years—the length of service we assumed for the legal profession—there would be about 158 new appointments to make yearly. As the apothecaries require to attend the university for only three semesters, 237 students would be enough to satisfy the demand on the supposition of no waste; or about 300, supposing a loss of

* [See Appendix, Note 10.]

STUDENTS OF PHARMACY AT THE GERMAN UNIVERSITIES.

	1831-41	'41-57.	'57-61.	'61-71.	'71-81.	'81-4.
Berlin, . . .	100	127	130	90	60	134
Breslau, . . .	8	18	37	55	42	60
Halle, ...	1	5	4	14	20	23
Greifswald, . .	—	—	—	9	22	19
Königsberg, . .	2	1	6	12	17	19
Bonn, ...	7	4	5	25	23	32
Göttingen, . .	14	30	30	35	33	24
Marburg, . . .	7	7	14	25	42	45
Kiel, ...	7	6	5	4	5	7
Munich, . . .	60	42	39	44	87	119
Würzburg, . .	10	12	18	22	43	29
Erlangen, . . .	4	7	17	18	33	21
Tübingen, . .	11	15	20	32	32	32?
Heidelberg, . .	—	20	22	9	9	6
Freiburg, . . .	3	3	5	3	9	15
Leipzig, . . .	5	11	23	40	88	105
Jena, ...	18	20	25	14	36	31
Giessen, . . .	15	18	25	14	22	23
Rostock, . . .	—	4	7	5	5	9
Strassburg, . .	—	—	—	—	30	38
Total, . . .	272	350	432	470	658	783
	Per 100,000 Inhabitants.					
	0·83	1·0	1·15	1·17	1·50	1·65
	Percentage of all the Students.					
	2·0	3·0	3·5	3·5	3·7	3·3
	Percentage of the Philosophical Faculty.					
	10·3	11·2	13·3	10·4	9·3	7·9

25 per cent. In Prussia, however, the number of qualified assistants amounted in 1875 to 41 per cent. of the proprietors of apothecaries' shops, which almost agreed with the number of such shops. As very many of these assistants are without means, a considerable proportion of them remain in this dependent position even to an advanced age. They must be reckoned, therefore, in addition to the proprietors; and if we apply to Germany the proportion for Prussia, the requirement of the empire might be set down at the present moment at about 420 students, and 210 licenses yearly, supposing 30 years as the period of service of all who pass

the examinations. No doubt in this calculation it is left out of account, that with the increase of the population there is an increase also in the number of apothecaries' shops, and this increase must be furnished from that supply. On this increase we have no information; but it may be assumed to be somewhat behind that of population, so that an increase of 1 per cent. is certainly put too high. On that basis we might conclude to an extra yearly demand of 58, which would necessitate the raising of the normal number to 270. Guttstadt says that from '73-9 the average number of apothecaries licensed yearly was 359, or 57 per cent. of the students of pharmacy (630) in Germany for the corresponding period, and 85 per cent. of those who must have finished their course of study. The waste therefore is not very considerable, but the figures are much higher than our calculation appears to demand. Since that time the number of students has increased 26 per cent., and of course the surplus has increased in like proportion. It is to be assumed that of the 783 students of pharmacy about 440 attain to license, while only 270 or 61 per cent., if our calculation is correct, can count on corresponding occupation. Only very few non-Germans study pharmacy in Germany. Prussians, on the other hand, in considerable number, attend non-Prussian universities, while the Prussian universities are attended in far smaller numbers by non-Prussians. In '82-3 there were 363 students of pharmacy matriculated at Prussian universities, among whom 13 at Berlin, 10 at Marburg, 6 at Halle—in all 29—were non-Prussians. On the other hand, we find at Leipzig alone 57 Prussian students of pharmacy, at Munich 31, at Würzburg 13, &c., in all, the not inconsiderable number of 160 Prussians at non-Prussian universities.

The total number of Prussian students for 1882-3

amounts to 485—that is, 1·62 for every 100,000 inhabitants, as against 1·67 for all Germany. The census of April 1, 1876, gave 829 apprentices whose apprenticeship comprises three years, and 900 unlicensed assistants who, likewise, have to serve three years before they may attend the university. About one-sixth of these (280) must matriculate annually; and assuming a course of one year and a half, the number of students would require to be taken at about 430, which is even somewhat surpassed by the number given above. On the whole, however, it appears that among the students of pharmacy also there was a great overcrowding in the middle of the *seventies*, and in the latest semesters this overcrowding has seriously increased.

In Austria, the number of students of pharmacy, according to Schimmer, was as follows:—

1841.	'51.	'61.	'71.	'76.	'76-81.
147	148	212	361	363	329
Per 100,000 Inhabitants.					
0·8	0·8	1·1	1·7	1·7	1·5
Per 100 Students.					
3·2	2·6	4·4	4·2	4·5	3·6
Per 100 Students of the Philosophical Faculty.					
—	—	26·4	20·7	17·1	15·9

As compared with the entire number of students, the students of pharmacy hold much the same place in Austria that they do in Germany, but they form in Austria a disproportionately larger part of the philosophical faculty.

B.—STUDENTS OF RURAL ECONOMY AND FORESTRY.*

Next to the students of pharmacy, the most numerous category of the matriculated immaturi is that of the students of agriculture. These, unfortunately, are seldom entered separately on the lists, but are classed along with the students of political economy, as in Prussia, or with the students of forestry, as in Munich, Giessen, &c. The source of error, however, is not so considerable as at first sight appears. In the first case, the number given is only a little too high, as at the Prussian universities it is only very few students who enrol themselves as students of political economy. In the few isolated cases where this is done, the students wish to make a special study of political economy or of statistics; and of the small number who take this course some enter as students of philosophy, but still more as students of law, as they generally study law at the same time. At the South German universities, where the students of agriculture are reckoned under categories other than those mentioned, they appear only in very small numbers alto gether. At Leipzig, the students of agriculture can be distinguished only since 1867. At Bonn, again, the total number enrolled in the High School of Poppelsdorf had to be counted, although among them there is a considerable number studying geometry; our statement therefore is too high.

So far as we have been able to determine, the following table shows the development of the number of students of agriculture at the universities, and at the affiliated agricultural institutes. We give only the universities that are of special account in this connection, and we give below the students at the separate agricultural schools.

* [See Appendix, Note 11.]

STUDENTS OF RURAL ECONOMY AT THE GERMAN UNIVERSITIES AND AT THE AGRICULTURAL SCHOOLS.

	'31-41.	'41-51.	'51-61.	'61-71.	'71-81.	'81-2.
UNIVERSITIES.						
Berlin,	—	—	—	5	10	16
Breslau,	—	—	—	—	—	29
Halle,	—	—	—	124	130	242
Greifswald,	59	41	39	30	9	—
Königsberg,	—	—	—	—	8	14
Bonn,	—	12	53	57	49	88
At the Old Prussian Univs.,	59	53	92	216	206	389
Göttingen,	3	2	23	26	24	24
Leipzig,	10	15	12	34	90	67
Jena,	17	49	82	59	16	17
At the other Univs.,	1	3	4	6	14	9
In all Germ.—Matric. Studs.,	90	122	213	341	350	506
AGRICULTURAL HIGH SCHOOLS.						
Proskau,	—	13	65	78	67*	—
Hohenheim,	20	83	95	88	61	67
Waldau,	—	—	22	9	—	—
Berlin,	—	—	—	43	55	60
Students of Rural Economy,	110	218	395	559	483	633

It was impossible in all cases, as already mentioned, to distinguish precisely the students of agriculture, and, in fact, students of forestry and geometry are in many cases reckoned as such. On the other hand, a number of students of agriculture attended the universities as matriculated students of philosophy and law, and also as unmatriculated students. This number could not be determined, but the one may be balanced against the other. On the whole, therefore, the figures may be taken as giving a sufficiently correct impression of the development of the scientific study of agriculture

* Including those studying at Breslau.

so far as numbers can do it. The increase is steady and considerable. Since the foundation, especially, of the Agricultural Institute at Halle in the beginning, and at Leipzig in the end, of the *sixties*, the increase is undeniable, although at the same time the attendance at Jena correspondingly decreased, and in this respect Greifswald followed. The separate agricultural institutes have had, down to the most recent period, a respectable attendance, and it was from no want of its share of students that Proskau required to be suppressed. It is, at all events, to be regarded as a step in advance that, more than hitherto, the agriculturist has within his reach the possibility of acquiring a strictly systematic training, and a deeper insight into the scientific foundations of his subject, which can nowhere be so well obtained as at the universities.

The percentage of foreigners can unfortunately be determined only for particular places, and not for the total number. At Halle, 13·5 per cent. of all the students of agriculture given were non-Germans; at Jena the percentage was 6·5; at Greifswald-Eldena, 14·2; at Göttingen, 4·1; at Bonn-Poppelsdorf, 8·6; at Hohenheim again, 33·1. These percentages show clearly how the fame of an institution lasts longer abroad than at home. When at its highest, Greifswald had from 3 to 9 per cent. of foreigners; the percentage then went up to 25, and in the last period to 35. The same was the case at Jena, where, in the earlier decades, the percentage of foreigners was from 5 to 8, and in the latest periods from 16 to 24.

In the *forties* there were in Germany about 6 students of agriculture for one million inhabitants; in Prussia, the number was not yet 5. In the *fifties* the numbers were 10 and 11; a decade later, 13 and 17; and in the last decade—a slight falling off—barely 13 and 15. The matriculated

students of agriculture formed the following percentages of the entire number of students in Germany:—'42-51, 1; '52-61, 1·7; '62-71, 2·5; '72-81, 2·3; and of the philosophical faculty for the same series of years—3·9, 6·7, 7·6, 5·8. They have thus kept tolerably abreast of the general development of the universities. Besides the students of agriculture we have here to consider also the students of forestry, of technical subjects, veterinary surgery, &c., who in earlier times formed a considerable proportion of the students at the South German universities till they were transferred to separate institutions devoted to the special subjects.

STUDENTS OF FORESTRY, TECHNICAL SUBJECTS, VETERINARY SURGERY, ETC.

	1831-41.	'41-51.	'51-61.	'61-71.	'71-81.
Munich,	83	58	7	16	31
Würzburg,	9	12	5	4	—
Giessen,	31	38	30	46	32

Of these numbers, it is only at a few universities that students of forestry can be separately distinguished. For our whole period they are found at Giessen alone in any considerable number, and in the most recent period at Tübingen and Munich. The figures for Giessen are by decades. Since 1820-9, 24, 35, 40, 18, 34, 16; in 1880, 27; and in 1881, 35. At Munich instruction in forestry has only been given since the autumn of 1878; the numbers have been, 1878-9, 107; '80, 115; '81, 99. At Tübingen the students of forestry in Würtemberg have long gone to the university to attend lectures on political economy and law.

Since Easter, 1881, the Forestry Institute at Hohenheim

has been transferred to Tübingen. The number of students of forestry at Tübingen was from 1870-9, 10; and in 1880 34.

Students of political economy in the narrower sense we find, as several times remarked, in the separate faculty at Tübingen and Munich, and also at Heidelberg and Leipzig.

	1831-41.	'41-51.	'51-61.	'61-71.	'71-81.
Munich, .	32	10	37	10	5
Tübingen,	62	95	67	66	69
Heidelberg,	54	47	24	18	—
Leipzig, .	—	—	—	12	40

The figures, however, can make no claim to exactness. At Leipzig there were certainly students of political economy earlier than at the date given; these, however, we had to reckon among the students of agriculture, while at Heidelberg under this head a variety of branches may have been represented. In Bavaria the students of political economy have more and more disappeared. It is only at Tübingen where they hold their old importance, to keep up the supply of officials to work the finance of the State.

It still remains, finally, to notice the surgeons in so far as they were matriculated:—

	1831-41.	'41-51.	'51-61.	'61-66.
Leipzig, .	44	48	23	2
Tübingen,	42	45	—	—
Freiburg,	19	17	9	—

These figures, however, as noticed above, by no means fully describe their importance, for in the *thirties* there were on an average at the Old-Prussian universities about 225, to which Breslau furnished an important contingent. In the *forties* we still count 190, while in the second half of the

fifties they disappear at all the universities except Berlin. In that university at the beginning of the *sixties* there are mentioned as matriculated students 60-80 pupils of the Military Academy for Medicine and Surgery and subordinate medical officers of the army who are attached to that academy.

CHAPTER XI.

THE UNMATRICULATED STUDENTS.*

THE unmatriculated students cannot well be left out of account in the treatment of our subject, as they derive benefit from the universities, and form in the main a class of students by no means to be despised. Among them we find legal probationers who have still to revise some lectures, and men who have passed their medical examinations but wish to take, say, a clinical course. In this class also appear men of a variety of occupations who wish to obtain some higher culture, such as chemists, merchants, literary men, farmers, both old and young, who have not the certificates requisite for matriculation; retired officers, civil servants, and other elderly people who attend some course or other for their own pleasure. These have only to apply for a ticket when they wish to attend some private course for which a fee has to be paid.†

By far the largest number of unmatriculated students are

* [A class of students very common in the Scottish universities, but without any special name or separate classification. By paying for the matriculation ticket and the class fee any person can attend any class in the university. Large numbers do, in point of fact, take advantage of this valuable privilege. In Scotland they are matriculated and enjoy the full advantages of the university for the period over which their matriculation ticket extends. In Germany and Austria they are not matriculated. They are called in Germany *Hospitanten* and in Austria *Ausserordentliche Hörer*.]

† The granting of this ticket belongs to the rector, who, in this matter, at least in Prussia, is bound by no fixed rules.

found at Berlin, where at the most recent date there were as many as 77·4 per cent. of all the unmatriculated students in Germany. The explanation of this is that there the students at the technical High Schools are entitled to attend the university and make a large use of the privilege; while mining engineers, for example, attend the university for lectures on the mining laws, and artists and architects for lectures on the history of art. Among the unmatriculated students, accordingly, we find at once those who have already finished their special professional studies and those who have not the previous training requisite for enjoying the full privileges of the university; and we find among them students for whom the lectures form an essential completion of their professional studies, and people who take advantage of these lectures more as an intellectual pleasure.

UNMATRICULATED STUDENTS
(Exclusive of Students of Pharmacy).

	1831-41.	1841-51.	1851-61.	1861-71.	1871-81.	1883-84.
Berlin, . . .	452	504	740	889	1,702	1,097
Breslau, . .	96	47	24	25	20	110
Halle, . . .	—	11	16	7	18	41
Greifswald, .	—	18	4	9	10	7
Königsberg, .	—	—	5	6	8	17
Bonn, . . .	17	23	26	22	32	75
Münster, . .	—	—	3	9	7	9
Göttingen, .	—	—	3	5	11	22
Marburg, . .	5	24	22	12	10	22
Kiel, . . .	—	—	—	2	36	20
Munich, . .	—	—	—	—	18	52
Würzburg, .	—	—	—	—	—	35
Erlangen, . .	—	—	—	—	—	—
Heidelberg, .	—	30	27	58	47	19
Freiburg, . .	—	13	11	7	31	59
Tübingen, . .	—	—	—	4	9	10
Leipzig, . .	—	—	—	52	100	108
Jena, . . .	—	12	16	22	23	21
Giessen, . .	—	—	—	9	17	—
Rostock, . .	—	—	—	6	4	—
Strassburg, .	—	—	—	—	40	76
At the Old-Prussian universities,	565	603	818	967	1,797	1,356
TOTAL, . .	570	682	897	1,144	2,143	1,800

These figures show that tickets for this class of students are on the whole much more generally issued in North than in South Germany. In the latter, indeed, the whole institution has only been quite recently introduced, and there are still two Bavarian universities which do not recognise the unmatriculated students at all in the official lists. The increase in the total number is to be attributed, in the first place, to the recognition of this class of students by universities which had not previously admitted them, and in the second place to the influence of Berlin, where the attendance at the other high schools has considerably increased, and this has told in a corresponding degree upon the number of unmatriculated students at the universities.

Of the entire number of students (21,830) at German universities, the class under consideration (2,277) at the end of our period formed nearly 10, in the *thirties* only 4·4, and in the *sixties* 7·9 per cent. At the Old-Prussian universities, from '77-81, they formed 19·1 per cent.; in the *thirties*, 10·3 per cent.; and in the *sixties* 13·7 per cent. If we exclude Berlin the proportion is considerably smaller. At the six South German universities in the *thirties* there are no unmatriculated students specified at all; and even in the *seventies* it is mainly the Baden universities which in this respect attract notice. This of course does not mean that there were no students taking particular lectures apart from the regular course in one or other of the faculties; it only means that they were not noticed in the official lists. At the universities other than the Old-Prussian such students in the most recent period were only 420, or 3·4 per cent. of the total number of students.

Here, again, it is interesting to make a comparison with Austria, where the corresponding class of students (called there " extraordinary ") form likewise a considerable number.

In the ten semesters '76-81 the number of students at the Austrian universities was, on an average, 9,174, of whom 1,400, or 15·2 per cent. were unmatriculated. In 1863 we find 5,279 students, among these even then 745 or 13·8 per cent. were unmatriculated. In this respect Vienna does not by any means preponderate in Austria as Berlin does in Germany. In the year '80-1 the unmatriculated students there were only 16·5 per cent.

Austria is peculiar in registering the unmatriculated separately for each faculty. In the most recent period we find 17·1 per cent. among students of theology, 7·5 among students of law, 21 per cent. in the medical faculty, and as high as 27 per cent. in the philosophical faculty. It is only the great preponderance of the legal faculty with its small number of unmatriculated students that keeps the percentage relatively low for the whole university. In Germany the largest number of the unmatriculated students attend lectures in the philosophical faculty, and next to that in the medical, while in the two others only very few are to be found.

CHAPTER XII.

THE STUDENTS AT THE OTHER HIGH SCHOOLS.

NEXT to the attendance at the universities it is of special importance to ascertain the number of students at the other High Schools, as they naturally have a mutual effect upon each other. First of all demanding notice here are the academies of architecture and the polytechnics, which are now in many cases united under the name of the Technical High Schools: to this class belong also the high schools for mining, forestry, and agriculture which we noticed above. Then, to complete our view, the schools of art will require to be taken into account. Statistics for these curiously do not exist even for Prussia, to say nothing of Germany; and we have, unfortunately, on this account been unable to present a complete view of the development of these important institutions. Still scantier was the fruit of our inquiry for material to determine the requirements of the country, and the number of those who have passed the examinations. With the aid of the authorities we may by-and-by succeed in obtaining more copious information on these points.

In the case of the technical schools we are met by the special difficulty that in many cases they have been developed quite gradually from humbler institutions; and it is hazardous to institute comparisons with earlier periods, when a number of institutions, unfit to rank as academies,

gave a training suitable to the requirements of the time to a large number of youths who were learning to be engineers, architects, &c.

The polytechnics at Dresden and Karlsruhe were founded as early as the *twenties*. At first they were merely schools, and it was not before 1851 that the former, and even as late as 1863 that the latter, assumed the character of a high school. The institution at Stuttgart began in 1832 as a trade school, and in 1840 became a polytechnic. The "Higher Trade School," founded in Hanover in 1830, was developed in 1845 into the polytechnic school. The same course was followed with the institutions at Darmstadt, Brunswick, and Munich in the years 1868, 1862, and 1868 respectively. In Prussia the architecture and trade academies founded at the end of the *twenties* and the beginning of the *thirties* were last year united into a technical high school, while the school at Aachen only came into existence in 1870-71. The institution at Cassel is now a school, whereas formerly it had, in a measure, the character of a university. Of importance for Germany also was the foundation of the Zürich Polytechnic in 1854 which at first attracted a large number of scholars from Germany. It appears, therefore, that in a few isolated cases in the *twenties*, and more widely in the *thirties* and *forties*, youths looking forward to employment in architecture, in construction of machines, in chemistry, mining, &c., had the opportunity of procuring a higher training in their special departments at separate institutions. Still all this was only in a subsidiary way, and at few places; and it is only since the *fifties* that we have to date the wider establishment and the more general influence of these institutions. A tabular and homogeneous comparison, however, we can only present for the period from 1868 onwards. Below we give the

details,* but here only the totals. At the German Technical High Schools we find, on an average—

Year, . .	1868-72.	'72-77.	'77-82.	'81-2.
Students, .	3,588	6,039	5,062	4,266

The number ran up wonderfully from 1868 to 1877, the increase being 87 per cent., but between the latter date and 1882 there was again a drop of 36 per cent. The increase in the numbers corresponds for a time with that in the attendance at the universities; but in the year '76-7 a backward movement takes place, which, indeed, is as considerable as is the forward movement at the universities. We have in this, undoubtedly, some support for the contention that the commercial depression has driven many from a business career into the civil service, nor has confidence yet been restored in commercial circles. The technical school at Zürich shows the same fluctuations as the German schools. In consequence, however, of the rush to the technical schools at the beginning of the *seventies* an overcrowding

* [We give the average numbers for the first years for which returns for each institution are given, and the average for '72-82. We thus see the gradual spread of these institutions for technical education in Germany, and the start which Germany had of England in this respect. Of course, all this time England with its vast trade had a far larger number of workshops than Germany, where practically, if not quite perfectly theoretically, a large amount of technical education was given. Our relative position is considered in the recently issued Report of the Royal Commission on Technical Instruction, vol. I., pp. 506 sqq.]

Average of the Years.	Dresden.	Karlsruhe.	Stuttgart.	Hanover.	Berlin.	Munich.	Darmstadt.	Aachen.	Bur swick.	Total.	Zürich.
1828-33	282	276	148	126	...	...	...	...	...	...	...
1848-53	...	...	...	...	524	...	...	...	...	...	...
1853-58	...	...	...	...	...	...	...	...	...	...	264
1868-69	...	...	...	...	...	369	...	...	...	...	...
1869-70	...	...	...	...	...	...	177	...	...	...	...
1870-71	...	...	...	...	...	...	...	253	...	...	...
1872-73	..	...	...	...	...	...	...	...	131	...	...
1872-82	583	495	660	635	1,337	1,090	210	350	198	5,558	911

has been felt in these occupations, for which attendance at these schools is necessary by way of preparation; and from the statistics it looks as if a considerable number of these students go forward to the examination in order to gain a civil appointment.

The students of forestry, to touch briefly on these here, averaged in Germany about 420 from 1860-9, and this number increased steadily to 701 in the year 1881. In Prussia alone the numbers correspondingly increased from 110 to 268. The increase is colossal. It is in some small measure explained by the fact that in Prussia at Eberswald and Münster the course ($2\frac{1}{2}$ years) is now half a year longer than formerly; at Karlsruhe the course has been modified in a contrary direction, from 4 years to 3; and at Aschaffenburg from $2\frac{1}{2}$ years to 2. These alterations, however, taken by themselves, are not sufficient to account for the increase, especially as they could only tell infinitesimally for all Germany. The increase rather indicates the growth of the struggle for a living guaranteed by the State.

In Austria the attendance at the high schools other than the universities has been specially noted since 1841. The following are the leading figures:—

At the Technical Schools.

1841.	'46.	'51.	'56.	'61.	'66.	'71.	'76.	'80-1.
1413	3187	2799	2092	2341	2708	2912	3663	2937

At the Commercial Academies.

376	569	309	566	748	883	1251	1005	1371

It is undoubtedly worthy of remark that as early as 1846 we have the same number as last year, and that even in the case of the technical students the time of the building and speculating mania caused no essential increase.

The increase came later than in Germany, and did not at all reach the dimensions which it reached there, nor consequently was the falling off anything so remarkable. The increase was greater among the students in the commercial schools in the year 1871, and after a slight falling off the high number has already been overtaken; we are unfortunately unable on this point to form a comparison with Germany.

For every 100,000 inhabitants the most recent period showed 13·3 technical students, of whom 11·2 were native Austrians. In Germany the corresponding number was not quite 10. It is well known, however, that in Austria the technical schools are attended by many who among us would be at the university. Still in 1876 the attendance at these schools was in Germany 15, while in Austria it was nearly 17, for every 100,000 inhabitants.

Analysing the attendance at the Austrian technical high schools we find that the attendance was made up as follows:—

	1880-1.	1876-7.
Engineering School, . .	1015 = 34·5 p. c.	1518 = 44·5 p. c.
High School of Architecture,	250 = 8·5 „	276 = 8·1 „
School for construction of Machines, . . .	571 = 19·4 „	471 = 13·8 „
Technical School of Chem.,	709 = 24·2 „	418 = 12·3 „
Unclassified, . . .	392 = 13·4 „	725 = 21·3 „
	2,937 = 100	3,408 = 100

In Germany we have only the details for Berlin, for which we are indebted to the kindness of Privy Councillor Wahrenpfennig:—

	Students at the Academy of Architecture or Trade Academy or corresponding departments of the Techn. High Schools.		Total.
1851-6	289 = 64·5 p. c.	159 = 35·5 p. c.	448 (say) = 100
1882-3	310 = 50·3 „	306 = 39·7 „	616 = 138

As was indeed to be expected these figures show a quite remarkable falling off in the school of architecture. The general building fancy, or rather mania, in the cities has abated. The railways too will not show the same expansion in the next as they have done in the last ten years. But the construction of machines, the utilization of electricity, and production for home use and export have a prospect of wider activity. The remarkable diminution in the numbers, however, is clearly the result of previous overcrowding, although the diminution seems to have passed its lowest point.

Starting with the year '68-9, and taking the attendance for that year = 100, we see in the following table the increase at the universities, the technical high schools, and the schools of pharmacy and of forestry respectively :—

	At the Universities.	Students At the Technical High Schools.	Of Pharmacy.	Of Forestry.
1868-9	13,424 (say) = 100	3,365 = 100	486 = 100	396 = 100
1876-7	16,891 = 126	6,588 = 196	604 = 123	353 = 89
1881-2	22,751 = 169	4,226 = 126	683 = 141	703 = 177
1882-3	24,000 = 178		773 = 159	728 = 184

The years in which attendance at the technical high schools is at its highest, 1876 and 1877, show a falling off or a standing still in the other institutions; but while the latter take a strong upward bound, the former remain behind and even show a remarkable falling off. The relative change comes sharply into view. The falling off, to be sure, of 2,000 at the technical schools is not sufficient to account for the increase of 6,000 at the universities. To give a correct impression we should have had to add the numbers at the art academies and at the commercial and trades' schools, and this unfortunately it was not possible to do. The above table gives also a good illustration of the struggle for a sure living in the service of the state.

CHAPTER XIII.

THE TEACHING BODY.

In the year 1880 the entire teaching body numbered 1,809 members; that is, taking the average of the 10 semesters, 1876-81, 1 teacher for every 10·81 students, or for nearly 13 students if we take the attendance in 1881-2. The absolute number has in course of time naturally increased. In 1835 the number of university teachers was only 1,186: it long fluctuated between 1,200 and 1,300: in 1865 it was 1,221: in the next five years it increased about 300, to which Strassburg contributed only 76. The following five years brought a further increase of 122; the next five —to 1880—another of 166, so that in fifteen years the number has increased from 1,221 to 1,809, or 48 per cent. In Austria the increase is still more marked. In 1863 the entire teaching body numbered 389; in 1869, 450; in 1876, 644; and in 1880, 703, or in 17 years an increase of 80 per cent. In this period, as we saw, several new faculties were erected. In Germany the proportion is steadily maintained between the teaching body and the number of students. The table presented on page 193 gives the total number of the teaching body at the German universities since the year 1835. The fluctuations in the proportion existing between the teaching body and the number of students at different times are inconsiderable, but for the sake of completeness they are here shown in tabular form (page 194).

The Teaching Body at the German Universities.

Year.	According to their Position as *a.* Ordinary Professors; *b.* Assist. and Honor. Professors; *c.* Privat-docents.																		Total Teaching Body.					
	Theology.						Law.			Medicine.			Philosophy.			Total.			Theology.		Law.	Med.	Phil.	Total of all the Faculties
	Protestant.			Catholic.															Prot.	Cath.				
	O.	A.	Prd.	O.	A.	Prd.	O.	A.	Prd.	O.	A.	Prd.	O.	A.	Prd.	O.	A.	Prd.						
1835	83	27	30	33	5	3	110	36	50	143	60	80	273	122	131	642	250	294	140	41	196	283	526	1186
1840	83	28	35	37	3	6	108	32	59	135	66	84	270	124	142	633	253	326	146	46	199	285	536	1212
1845	84	29	30	38	5	4	115	28	50	139	73	78	293	150	131	669	285	293	143	47	193	290	574	1247
1850	79	30	26	40	4	7	114	34	46	146	64	105	304	161	146	683	293	330	135	51	194	313	611	1304
1855	77	35	20	39	5	5	113	34	45	139	64	112	304	148	162	672	286	344	132	49	192	315	614	1302
1860	72	24	18	36	5	4	96	31	36	131	63	97	270	135	137	605	318	292	114	45	163	291	542	1215
1865	65	24	15	35	7	8	106	31	32	135	70	117	288	160	128	629	292	300	104	50	169	322	576	1221
1870	87	24	15	43	9	7	126	30	41	166	100	146	383	175	169	805	338	378	126	59	197	412	727	1521
1875	92	28	18	44	3	4	137	31	22	197	99	158	439	219	152	909	380	354	138	51	190	454	810	1643
1880	96	26	19	41	3	7	139	29	25	194	139	191	477	236	217	967	423	459	141	51	193	494	930	1809*

* [In the year 1883 this total had increased to 1833.]

Year.	Number of Students to each Member of the Teaching Body.						Number of Students to each Ordinary Professor.					
	a. Total.	*b.* The Separate Faculties.					*a.* Total.	*b.* The Separate Faculties.				
		Theology.		Law.	Medicine.	Philosophy		Theology.		Law.	Medicine.	Philosophy
		Protestant.	Catholic.					Protestant.	Catholic.			
1835	11·00	22·14	31·36	18·73	9·11	4·53	20·26	37·38	39·00	33·38	18·04	8·67
1840	9·48	15·76	20·22	16·31	8·05	5.07	18·15	27·81	25·14	30·05	16·96	10·06
1845	9·30	14·80	21·16	17·91	6·70	5·38	17·33	25·20	26·16	29·98	14·00	10·55
1850	9·11	13·32	24·61	20·77	5·84	5·04	17·55	22·76	31·37	35·34	12·52	10·12
1855	9·46	13·25	25·78	21·65	7·27	4·65	18·32	22·74	32·40	36·70	16·55	9·38
1860	9·86	20·64	26·71	12·39	7·32	6·52	19·81	32·68	33·40	28·78	16·27	13·10
1865	10·85	23·43	22·44	16·86	7·56	7·87	21·06	37·50	32·06	26·88	18·00	14·93
1870	8·94	17·10	16·32	15·24	6·89	6·37	16·88	24·76	22·40	23·84	17·10	12·10
1875	9·80	12·89	16·16	21·60	7·69	7·30	17·72	19·35	18·73	29·95	17·72	13·47
1880	10·81	13·91	13·02	26·35	7·56	8·72	20·22	20·43	16·20	36·60	19·25	17·00

In 1865 there were 10·85 students for each teacher; in 1880, as we saw, 10·81, and only quite recently has the number increased. In Austria the number of ordinary students for one teacher was, in 1863, 11·9; in 1869, 15·2; and in 1880, 11·8, or nearly the same as in Germany, leaving out of account, as we did for Germany, the assistants (Adjunkten) and readers, who in Austria are reckoned with the teaching body. The proportion was at its lowest in Germany in the year 1870 (1 to 9·80), and at its highest, apart from '81-2, in 1835 (1 to 11). The fluctuations therefore are inconsiderable. The figures strikingly show that, as well through arrangements effected by the care of the Government as by voluntary pressure to gain the chairs by Habilitation,* account has been taken of the wants of the universities, and care has been directed to the maintenance of a proper proportion between the teachers and students. On the whole, it is not to be assumed that the converse effect has been produced, and that the appointment of new professors has contributed to the large increase in university attendance. An exception to this remark will of course be found in the new professorships for modern languages and also for geography, which are well known to have attracted many of the Real-school men to the university. Looking at the total number of the teaching body, no essential difference in the development is noticeable between

* ["The *Privatdocent* is an assistant to the professorate: he is free to use, when the professors do not occupy them, the university lecture rooms, he gives lectures like the professors, and his lectures count as professors' lectures for those who attend them. His appointment is on this wise. A distinguished student applies to be made *Privatdocent* in a faculty. He produces certain certificates and performs certain exercises before two delegates named by the faculty, and this is called his *Habilitation*. If he passes, the faculty name him *Privatdocent*." Higher Schools and Universities in Germany, p. 156. By Matthew Arnold, D.C.L. Macmillan & Co.]

Year.	Percentage of the total number of University Teachers.			Percentage of the total number of Teachers in Theology.						Percentage of the total number of Teachers in Law.			Percentage of the total number of Teachers in Medicine.			Percentage of the total number of Teachers in the Phil. Faculty.		
				Protestant.			Catholic.											
	O.	A.	Prd.	O.	A.	Prd.	O.	A.	Prd.	O.	A.	Prd.	O.	A.	Prd.	O.	A.	Prd.
1835	54·13	21·08	24·79	59·28	19·28	21·43	80·49	12·20	7·31	56·12	18·37	25·51	50·53	21·20	28·27	51·90	23·19	24·91
1840	52·23	20·87	26·90	56·85	19·17	23·98	80·43	6·52	13·05	54·27	16·08	29·65	47·36	23·16	29·48	50·37	23·13	26·50
1850	52·30	22·40	25·30	58·12	22·22	19·26	78·43	7·84	13·73	58·77	17·52	23·71	46·64	20·44	33·00	49·75	26·35	23·90
1860	49·80	26·17	24·03	63·16	21·05	15·79	80·00	11·11	8·89	—	—	—	45·01	21·66	33·33	49·81	24·90	25·29
1870	52·93	22·22	24·85	69·05	19·05	11·90	72·88	15·25	11·87	63·97	15·23	20·80	40·29	24·27	35·44	52·68	24·07	23·25
1880	53·45	23·38	25·37	68·08	18·44	13·48	80·39	5·88	13·73	72·02	15·03	12·95	39·27	28·14	32·59	51·29	25·37	23·34

the Prussian and South German, or between the large and small, universities. Of course at the large universities there are far more students (at present 15·4) for one teacher than at the small ones (7·4).

The number of docents increases almost exactly in the same way as that of the professors. In 1835 it formed 24·79 per cent., in 1880 25·37 per cent., and in 1865 24·57 per cent. of the entire teaching body. Any disturbance of this proportion is only temporary. In 1840 it reached the maximum of 26·9 per cent., and went down in 1875 to 21·55 per cent. In Prussia the number of the docents is larger in proportion than in South Germany, where the ordinary professors have by far the preponderance. It appears, further, that the large universities were preferred for settling down at (and, indeed, that has always been the case), the docents forming at the three large universities 30 per cent. and at the six small ones 20 per cent. of the teaching staff.

Since the year 1875, the Prussian Government, in acknowledgement of its appreciation of the work of the docents, has taken measures to increase their number, and in this way to secure a larger field from which to appoint the professors. Every year since 1875-6, when it was first introduced, the budget has contained an item of £2,700 "for the support of docents and other young men of learning intending to follow a university life." * We shall

* In a document addressed to the faculties in 1875, Minister Falck explained the intentions of the Government as wishing, by this *stipendium*, to furnish young men of ability, but of slender means, with the *preparatory training* requisite for a university course. The applicant, on the comple tion of the curriculum, was to proceed to the doctor's degree, with honours, and then by the production of scientific works to evince his fitness and capacity, and at the same time to declare his wish, to devote himself to the career of learning. The granting of this *stipendium* the minister reserved entirely to himself. But in granting a *stipendium* to those already engaged

now consult the statistics as to whether this measure has attained its end. The first stipendia would be apportioned in the winter semester of '75-6; and since that semester, according to the General Education Report and the Official List, an increase of the docents at the Prussian universities has in point of fact taken place.

The following figures show the increase :—

	1874-5	'75	'75-6	'79-80	'80-1	'82-3
Docents at the Prussian Universities,	189	194	206	263	253	261
,, ,, Non-Prussian ,,	129	147	144	198	212	224

But it must be borne in mind that among the docents also considerable fluctuations take place, and the first two semesters given above fall exactly in the time of the lowest ebb. A few semesters previously (1871) the number had been 241, and in the following ones it had gone steadily down till in 1875 it was 194. In 1870 and in 1867 the figures were 226 and 228. At the other universities also the number had gone up from 168 in 1875 to 207 in 1880, an increase of 30 per cent., the same as in Prussia. By 1882-3, however, the proportion had changed considerably in favour of the rest of Germany, the increase in Prussia being 34 per cent. as against 49 per cent. in the rest of Germany. The statistics before us therefore contain nothing to indicate the effect of the granting of the stipendia to the docents. More might be gathered from a comparison of the recent appointments, but on this we have as yet no information. We must give the new arrangements a longer trial before we can form an accurate judgment of their effect. It is clearly general causes which have recently brought about the increase in the number of the docents. These have been more effective than a money payment, but they have wrought very unequally in the different lines of study.

as docents, he will regularly avail himself of the co-operation of the faculties.

The extraordinary [or assistant] professors in different years maintain with great regularity the same percentage, which is only a little behind that of the docents. It fluctuates between 21·08 in the year 1835, and 26·17 in the year 1860. They are more strongly represented in the North than in the South, and considerably more strongly at the large than at the small universities.

The ordinary professoriate went down from 642 in 1835 to 605 in 1860. By 1880 it had increased to 967, more than 50 per cent.; but even with this increase it did not form an essentially higher percentage of the teaching body, and relatively to the number of students it had undergone no considerable change. In 1835 there were 20·26 students for one professor; in 1860 the number was 19·8; and in 1880, 29·2. At the old-Prussian universities the proportion was one professor for 25·6 students; at the South German for 20·7; and at the three largest universities for 41·3. At the small universities the ordinary professors form a larger proportion of the teaching body (65 per cent.) than at the large ones where it is 38 per cent. In Prussia they formed last year 47 per cent., and in South Germany 57 per cent. of the teaching body.

In Austria, the proportion was as follows:—

	Ord.	Percentage of Univ. Teachers.	Assist.	Percentage of Univ. Teachers.	Priv. doc.	Percentage of Univ. Teachers.
1863	228	58·6	70	18·0	91	23·4
1869	217	48·2	92	20·4	121	31·4
1876	292	45·4	179	27·8	173	26·8
1880	318	45·2	172	24·4	213	30·4

The proportions agree in the main with those in Germany, except that here the ordinary professoriate has recently rather fallen back, while the docents are more numerous than in Germany.

The proportion naturally varies in the different faculties.

The number of docents is relatively largest in the medical faculty. Many physicians who attain great eminence in some special subject for which there is no ordinary professor, and others with no aim of publishing, but who devote their strength to practical work, take a docent's post for a time, with the view of raising their reputation. This is most apparent at the largest universities where they form 46 per cent. of the teaching body, as against 29 per cent. at the small ones. In 1870 the docents in the medical faculty formed 35·4 per cent. of the entire teaching body; in 1845, only 26·85; and in 1880, 32·59 per cent. which is only a little beyond the average. This proportion has always been tolerably uniform. The number of assistant professors has steadily increased, while the ordinary have gradually taken a lower proportion. The cause of this is that in more recent times extraordinary professorships have been founded for many special subjects, such as diseases of the ear, diseases of the eye, diseases of children, psychiatry, &c., for which ordinary professors do not exist at all, or only at few universities. In many cases, too, the assistants of ordinary professors were promoted to professorships. In 1835 the ordinary professors formed 50·53 per cent. of the teaching staff, in 1880 only 39·27 per cent., although in 1835 there were only 143 professors, whereas the number was 194 in 1880. In the 15 years 1865-80, excluding Strassburg, and the number of universities being, therefore, the same in both years, there has been an increase of 46. In this period the number of extraordinary professors has even doubled—from 70 to 139. The docents have increased from 91 in 1835, to 191 in 1880.

At the beginning of last century the medical faculty at Leipzig, Heidelberg, and Tübingen had only two chairs. Göttingen began with 4: at the beginning of the present

century it had 6, and at present it has ten ordinary professors. At Leipzig, the faculty, in 1805 had risen to 5 professors; in 1830 to 9; and at present the faculty consists of 11 professors. At the present moment no German medical faculty has fewer than 7 ordinary professors, and none has more than 14, the number at Berlin and Strassburg.

Billroth gives the following explanation of the important increase of the medical professorships in the last fifty years. "There has been," says he, "a gradual development of practical instruction in medicine in the faculties since the middle of the eighteenth century. The professorships of practical clinical instruction developed in the third and fourth decades of this century into clinical instruction in surgery and midwifery. In the course of the seventh decade of our century the treatment of the eye was separated from surgery, and erected into an independent professorship. The speedy development of pathological anatomy necessitated in the fifth and sixth decades of this century the appointment of special professors; and at the same time physiology became so extensive a subject, that in the sixth and seventh decades it had to be separated from the chair of anatomy, and erected into a separate subject of instruction." Quite recently we have had founded new ordinary professorships for pharmacology and psychiatry, while at the larger universities the clinical posts had even at an earlier date been provided with two professors.

The proportion of the number of students to each ordinary professor has fluctuated considerably, but through the rapid increase in the attendance it has, at the close of the period under our consideration, reached the point which it held at the beginning, and has even gone somewhat beyond it. In 1835 there were 18·04 students for each ordinary professor,

and in 1880 19·25. The lowest figure was 12·52 in 1850, In that year each teacher in the medical faculty had only 5·84 students, in 1835 9·11, and in 1880 7·56.

In the faculty of law the number of students to each ordinary professor is nearly the double of that in the faculty of medicine, and at present to each teacher the number of students is more than three times larger than that in the medical faculty. In the law faculty, however, large classes involve less danger of detriment to the students. In 1835 there were 33·38 students for one ordinary professor, and 18·23 students for one teacher; the corresponding numbers in 1880 were 36·6 and 26·35. The lowest proportion in the case of the ordinary professors was 23·84 in the year 1870, and in the case of the teaching body 12·39 in 1860. At the present time, therefore, there are more than twice as many students to each teacher in the law faculty than there were in 1860. These variations are caused solely by the fluctuations in the number of students, as the numbers of the teaching body in this faculty have varied but little. In 1835 the teaching body in the faculty of law numbered 196; in 1880, including Strassburg, 193; in 1860, again, the number was 163. In Berlin at the present time there are 18 actual teachers of law, and of these 11 are ordinary professors; in Leipzig the corresponding numbers are 14 and 9, in Jena 10 and 6, in Giessen and Kiel 6 and 5, and in Rostock 5 and 5. In this faculty there is latterly but strikingly small inclination to undertake the work of a docent. From 1840 to 1875 the number of docents went down from 59 to 22, and only in 1880 did it rise to 25. Between 1840 and 1880 the proportion of docents to the entire teaching body has gone down from 29·65 to 12·95. The assistant professors have never occupied in this faculty the position they hold in the medical faculty. They

are sometimes 18, sometimes 15 per cent.; and in 1880 the ordinary professors formed 72 per cent. of all engaged in the teaching of law.

In the two theological faculties the total number of the teaching body has not varied to any considerable degree. In 1835 the Protestant faculties contained 140 teachers of all grades, and the catholic 41. In 1880 the numbers were 141 and 51. In 1865 the Protestant faculties went down to 104, the falling off being mainly observable in the ordinary professors. On the whole, however, the number of these has increased: in 1835 there were 83; in 1865, only 65; but again in 1870, 87; and in 1880, 96. In the Catholic faculty the numbers for the same years were 33, 35, 41. At present they form 68 per cent. of the entire teaching staff in the Protestant faculty, and as high as 80 per cent. in the Catholic. At the present time Berlin has 7 ordinary professors of theology in a teaching body of 16. The corresponding numbers at Leipzig are 8 and 15, Jena only 4 and 8, Rostock only 3 in all, and Giessen a teaching body of 5, all of whom are ordinary professors. At Tübingen there are 5 Protestant professors and 6 Catholic, and no docents or assistant professors. Of all the faculties the number of docents is relatively and absolutely smallest in that of Catholic theology. In '80 they formed 13·7 per cent.; in '60, 8·8 per cent.; and in '35, as low as 7·3 per cent. of the teaching body; although to be sure the proportion in the Protestant faculty is at present only 13 per cent.; it being in '70, 11 per cent., and in '40 as high as 24 per cent. There is at present as little inclination to take the docent's office in the faculty of theology, as in that of law. In both faculties, indeed, the chairs have often to be filled by men called from practical work, as suitable men cannot be found in the ranks of the docents. The

normal proportion of docents to the entire teaching body appears to be from 20 to 24 per cent.

Taking the faculties of medicine and law together, the number of students to one teacher is 13 or 14; in the Protestant faculty of theology the number is 20 to every ordinary professor, and 16 in the Catholic. This proportion is smaller than formerly; in 1835 the numbers were 37 and 39.

The philosophical faculty shows the largest increase in the number of the teaching body. Between 1835 and 1880 the number has grown from 526 to 930, which is at present more than half of the entire teaching body at all the universities. The increase has been specially rapid since 1865, and no less so in the case of the ordinary and assistant professors than in that of the docents. The last-named formed steadily from 23 to 26 per cent., and the ordinary professors from 49 to 52 per cent. of the teaching body. No doubt the students have still more strikingly increased, so that at present the number to one teacher is almost the double of what it was in 1835. If the statement of this proportion gives but little definite information, it loses any value that it has in the philosophical faculty, where a large number of the ordinary professors, such as the representatives of Sanskrit, the Slav languages, &c., are regularly attended only by a few pupils, while the teachers of the ancient classics can always reckon on a steady and large attendance. Too great a variety of subjects is classed together for the average to be a standard for any. On the other hand, it must be kept in view that the lectures of many of the teachers in this faculty are attended by students of the other three; although no doubt this is no longer the case with the philosophical lectures in the same degree as formerly. They are still steadily attended, however, by the students of

theology, who, for the most part, take lectures in philology, and especially in philosophy. Medical students we find as regularly attending chemistry, botany, and zoology; while the students of law are beginning, and lately in larger numbers, to take lectures in political economy, which, except at Munich, Tübingen, Würzburg, and Strassburg, are delivered by members of the philosophical faculty.

In Prussia alone, since 1867, 56 new ordinary professorships have been established. The corresponding number, however, at the non-Prussian universities, apart from Strassburg, was 119. In the latter case the number was doubled; in the former there is an increase of about one-third of the previous number. The new foundations are specially for Comparative Philology, Modern Languages, Archæology, Egyptology, Geography,* Agriculture, &c. The professorships of history besides have been increased, special attention being given to modern history in the new foundations, as opposed to those for ancient and mediæval history. The chairs of botany and chemistry also have, in many cases, been separated.

In the LEIPZIG Calendar for 1837, we find in the philosophical faculty 14 ordinary and 14 assistant professors, and 9 docents—in all 37. By 1860 this total had increased to 46, being composed of 19 ordinary and 15 assistant professors and 12 docents. In 1882-3 the total teaching staff consisted of 97 members, of whom 35 were ordi-

* In the *thirties*, Ritter was the only ordinary professor of geography in Prussia; at present there is a professor of this subject at almost every Prussian university. Hoffbauer, in his "History of the University of Halle to the year 1805," says—"At first there were only 8 professors in the philosophical faculty, and then a ninth was added (in 1882 there were 23). Natural philosophy meanwhile was taught by a medical professor, as likewise were chemistry and botany. Gundling, in the faculty of law, lectured on astronomy." In 1810 the philosophical faculty at Berlin had 13 ordinary professors; at present there are 38.

nary, and 30 honorary and assistant professors, and 32 docents.

The separate studies of the faculty were represented by ordinary professors as follows :—

Year.	Philosophy.	Classical Philology.	Sanskrit, Oriental, and Modern Languages.	Archæology and History of Art.	History.	Mathematics and Astronomy.	Science.	Political Science.	Rural Economy.	Total.
1835	4	2	1	—	2	1	2	2	—	14
1860	2	3	3	1	1	1	6	2	—	19
1882	2	5	9	2	2	4	7	2	1	35

At Munich we find the following ordinary professors :—

Year.	Philosophy	Philology.	History.	Mathematics.	Science.	Geography.	Sanskrit, Oriental, and Modern Languages.	Political Science.	Archæology and History of Art.	Total.
1833	2	2	3	2	6	—	1	6	—	22
1860	2	3	3	2	8	1	2	7	1	29
1882	4	3	5	2	9	—	5	8	2	38

At Munich, as is well known, a conspicuous place is held by the faculty of political science, which we had here to class with the philosophical faculty.

At Berlin the various studies of the philosophical faculty were represented by ordinary professors as follows :—

Year.	Philosophy.	Philology.	History.	Mathematics and Astronomy.	Science.	Geography.	Sanskrit, Oriental, and Modern Languages.	History of Art, Archæology, and Literature.	Political Science.	Total.
1835	2	2	3	2	5	1	3	2	2	22
1860	1	3	3	3	7	—	3	2	2	24
1882	2	4	5	3	9	1	8	4	2	38

We are at once struck by the dissimilarity of the development. Philosophy and political science, and also mathematics, are only a little more strongly represented at the end than at the beginning of our period, and that rather by chance than on principle. The division of work in science, again, has been considerably developed. The increase, however, is strongest among the representatives of the non-classical languages, where a series of new sciences have only recently sprung into existence, or forced their way into more independent studies. Even the ancient languages are at present taught by more ordinary professors than formerly, and yet fifty years ago classical philology was a subject completely thrashed out in all directions, and only required as its complement archæology and ancient history, which were represented by special professors. It is, on the contrary, only in our own time that German, Egyptian, and Indian philology have outgrown their childhood, and that the Romance languages and English have experienced such considerable development as to be represented at the larger universities no longer by readers but by ordinary professors. Separate professorships, finally, have been specially endowed for the Slav languages at Leipzig, and for Celtic at Berlin,

&c. Here, in fact, new sciences have sprung into existence which require a professor wholly to themselves, and where the means were forthcoming a special teacher has been assigned to them.

Still more striking does the development appear if we look at the number of lectures announced, whether by ordinary professors or by docents. At Berlin, in 1882, there were announced 19 courses on classical philology, including exercises, and among these 11 were private, and therefore paid for.* There were, on the other hand, 65 courses on the non-classical languages, but of these only 25 were private. In 1860 the number of the former was about as large, 19 and 10, while that of the latter was only 45 and 18. In 1848 again we find only 25 courses on the non-classical languages, and among these only 12 private. At Leipzig, in 1835 and 1836, there were announced 17 courses, including exercises, &c., on classical philology, and among these, strange to say, only two private courses; while on the oriental languages, modern languages, &c., there were 10 courses given by professors and docents, and 6 given by readers. In 1860 there were 25 courses on classical philology and 16 on other languages: in 1882-3 there were 17 lectures on classical philology, and among these 9 private; on oriental philology † alone 26 (of which 15 were private); and on modern philology likewise 26 (of which 17 were private). To the development therefore of modern philology

* ["An ordinary professor is bound by regulation to give throughout the semester at least two free lectures a week on his subject; if he tried to charge fees for them, it would be the curator's (see above, p. 23) business to interfere." Higher Schools and Universities in Germany, p. 150. By Matthew Arnold, D.C.L. Macmillan & Co.]

† [Although not difficult to account for historically, it is still a curious educational fact, that in the Scottish universities the oriental languages still form a branch of the faculty of theology.]

(so called in contradistinction to ancient classical philology) is to be attributed the large increase of the teaching body in recent times.

In proportion to the number of students, a large increase of the teaching staff has become necessary. This is caused by the development to which we adverted above, and of more recent date generally adopted, in the matter of examinations, exercises, demonstrations, &c., and, indeed, in this respect, a further advance is desirable, and is to be expected. We do not here refer merely to the appointment of new professors for the development of new subjects, but also to the supply of more teachers of the same subject when the increase of numbers renders such necessary.

In the regular lectures it is really unimportant whether the number of students be large or small—nay, the stimulus for the lecturer may be all the greater the more students he sees before him. It is different, as above hinted, when the subject is connected with practical demonstrations or when the students are to be set to do independent work, as is the case in the laboratory, or at clinical lectures, as also in the examinations and work illustrative of the lectures, where the teaching is given to select audiences, and for the most part for no fee. In these cases the object of the teacher is to tell directly upon the individual student; with this aim, he personally conducts his students along special lines of research, and he criticises their work, which, of course, is only possible if he has a relatively small number before him. Work of this nature, apart from the regular lectures, has long been in general use in theology and classical philology, and more recently it has been coming more and more into practice in law, history, mathematics, science, and political economy.

This was another point on which we attempted to form

statistics on the basis of the lecture programmes, but we have not been able to reach any satisfactory result. In many cases, apart too from philology and theology, exercising-classes were formerly announced; but they had rather—a point not indicated in the programme—the character of repetitions or class examinations—as they are sometimes expressly called—held with the object of completing and fixing the students' knowledge in view of some examination, than of private advanced classes, whose object is the stimulating of the scientific spirit and the quickening and promoting of the productive power of the student. In other cases they furnished only practical demonstrations. This was specially the case in classes for science, where indeed the demonstrations were indispensable, and were also valuable as a complement to the lectures; but they do not correspond to the modern private advanced classes of which we speak. On this point, however, the figures are quite insufficient to indicate actual progress; but the more such private advanced classes are introduced, as complementary of the ordinary lectures, the more will the German universities promote that peculiar excellence of theirs by which they are distinguished from the universities of other countries. The German universities do not merely furnish the student with knowledge: they train him also to intellectual independence, and they develop his power of independent work.

The philosophical faculty, as we saw, has experienced an extraordinary increase of members. In some cases the average increase is at present represented by more than twice, and in many cases by more than thrice, the number at any of the other faculties; and, in consequence of this increase, the idea has occurred of making a division of the philosophical faculty. It is not to be denied that it comprises very heterogeneous elements. In voting, too, on

questions affecting some special study, the decision lies with men in whom deep knowledge of the subject and of the persons concerned is not to be expected; the mere business of the faculty, moreover, is increasing to an extent that can scarcely be overtaken by a single dean.

Political science is naturally more closely connected with law than with philology, while it has also close relations with such technical subjects as agriculture and forestry, and also with history. It gravitates to the faculty of law or philosophy in some cases, according to the inclination and training of its professor; in others, according as technical studies hold a more or less important position at the university. As already mentioned, it is at two universities (Tübingen and Munich) an independent faculty—an arrangement which can scarcely count upon wider imitation; while Strassburg and Würzburg have assigned it to the law faculty.

Science is every day assuming a more commanding position in the field of knowledge, and is gradually becoming a department complete in itself. Along with mathematics, it is represented at the large universities by 11 or 12 ordinary professors, or not quite a third of the entire ordinary professoriate in the philosophical faculty, while at the smaller universities it is usually represented by rather over a third.

In 1863, Tübingen took the lead in dividing the philosophical faculty, by establishing a special faculty of science with a separate dean. Strassburg followed this example in 1873. The question of dividing the faculty was also ventilated, after the action of Tübingen, at Munich and Würzburg; but there they have been content to leave the faculty its old dimensions, and in the official lists and programmes of lectures it still appears as heretofore. It has been divided, however, into two sections, the one comprising philosophy, philology, and history, and the other

mathematics and science. At Munich each section has a separate dean, at Würzburg both are under one dean; but at both universities they meet separately and conduct independently of each other the business connected with the section, while circumstances common to both are discussed at meetings where both meet in common.* Similar movements have been attempted at some of the Prussian universities. Hitherto, indeed, they have not been attended by much success; but if the development of the philosophical faculty goes only a little farther, its division may well be regarded as merely a question of time. The question for the present is one of no great importance. At the largest universities the unity of the faculty has produced scarcely any perceptible disadvantage. The division of the faculty might equally be productive of no really ill effect upon the study of the separate subjects, provided that there exists, for the whole university, either a single senate, with extensive powers, or a Government department that will carefully watch and foster the university life. It would be the duty of the latter to oppose any display of party spirit on the part of its chief, or too great pushing of personal views or special partiality for particular studies. The former is the prevalent danger to be guarded against in the South, the latter in the North, although both of them are still largely prevalent in Germany.

Hitherto we have regarded the professors only as teachers, and have compared their number with that of the students. But it is well known to be the peculiarity of the German universities that they are not only teaching institutions,

* "The Question of the Division of the Philosophical Faculty." Rectorial address at Berlin by A. Wilh. Hoffman. Berlin, 1880. At Bonn there has been a division into 4 sections since 1834. At Leipzig there are 3. At Breslau there were 2 formed in 1866, but there has always been a close connection between them.

but at the same time in an eminent degree workshops of science. The increase therefore in the number of the teaching body has an importance in another direction. The number of university teachers (exclusive of readers), we saw, has increased since 1835 from 1186 to 1809 or 52 per cent., and in the last 15 years 48 per cent. The meaning of this is not merely that there has been this numerical increase in the teaching staff of the universities: it means, further, that there has been a corresponding increase in the number of men who devote their lives to learning, and who by their profession are put into a position and stimulated, nay compelled, to work for its advancement with all their might. We have, it is true, no colleges richly enough endowed to free their members from all anxiety about a living, and to enable them to give undivided attention to intellectual work untroubled by other cares. But we can well dispense with these so long as Germany has its large number of universities: and an increase of its teaching power would still be an advantage, although there was no corresponding increase in the number of students. We admit to the teaching office only men of proved ability and capacity to promote learning. This is the sole test. We fill the chairs with none but men who have already given proof of their powers; nay, it is often charged against electing bodies that in appointing to chairs too little weight is attached to power of communicating, and that too exclusive regard is had to literary activity.

The entire body of university teachers, accordingly, may be regarded as a standard of the purely scientific activity of the nation. Not that there is no advancement of science beyond this circle. Everybody rather will acknowledge the important literary work we owe to our official classes

in jurisprudence and political economy, to the masters of our high schools in philology, to medical practitioners in medicine, and to men engaged in trade and industry in the domain of science. But in Germany more than in any other country we endeavour to attract to the university powers so proved. Even the ablest men in other occupations have not the leisure, the stimulus, nor the support in their work which the members of the universities command, and learned men of independent means are rarer in Germany than in any other cultured state. The reason of this is to be found in the much closer connection that exists in Germany than elsewhere between a man's occupation or profession and the social position which this confers. We may find the reason of it further in the limited comfort of the middle classes, who are thus generally impelled to take to some profession that will support them. These facts give the above numbers a special significance.

CHAPTER XIV.

THE SCHOOLS IN RELATION TO THE UNIVERSITIES.*

Our inquiry into the circumstances affecting attendance at the universities would be incomplete did we not extend it to the schools, and take special account of the number of scholars at the preparatory institutions. We confine ourselves here mainly to Prussia, as for no other state are the figures in every way so complete, and indeed for all Germany the numbers were not to be got: and besides, Prussia, we are convinced, is, as regards the development of the universities, in complete harmony with Germany. Our results for Prussia, therefore, may be accepted as applicable to the whole nation; although of course between the different parts of Germany, as for example between Bavaria and Würtemberg, there exist very great differences. Even between the different provinces of Prussia such differences exist, but the formation of averages does something to equalize them.

Some writers have compared the three grades of our education system to a pyramid, and have written as if the spread of higher education were to be measured by the numbers proceeding from the elementary schools to the higher schools and thence to the university. In this way it is asserted that in the year 1864 for every 100 boys

* [The earlier part of this chapter is considerably abridged in the translation. The omissions are occupied mainly with controversial matters.]

attending the elementary schools, only 8·63 received an education beyond the range of the elementary schools, and only 5·57 the instruction of the gymnasia. Still fewer of course reached the third or university stage, where the proportion of students is stated to have been only 0·37 per cent, of the boys at the public elementary schools, or 4·26 per cent. of the boys at the middle schools of all grades. By comparing the numbers at the universities and higher schools with those at the elementary schools, the attempt has been made to show that for the 40 years after 1820 the desire for higher education had diminished and not increased.

The reply to such statements and comparisons is that the pyramid is in point of fact not constructed in this way at all. The middle schools are not attended by those who have been at the elementary schools, nor is the attendance at the university made up of those who have been at the middle schools. A large proportion of the boys, especially at the gymnasia, have never been at the elementary schools at all, but have got their preparatory training either privately or at private schools. The largest proportion, however, receive this training at the junior departments of the gymnasia (Vorschulen), or at the progymnasia, or at the higher burgh schools with elementary classes: they did not at all events receive it at the public elementary schools, on the basis of whose attendance the above comparisons are made. No exact estimate can be formed of the numbers in question. In 1883 the number of children of school age educated elsewhere than at the public elementary schools was 385,481, of whom 133,481 were at the schools of higher grade and at the seminary schools: of course a large number of these were beyond the elementary classes. In Prussia for the year 1880-1 the number of boys at the *Vorschulen,* or elementary departments of higher schools, was

10,361, or very nearly the number of Prussian university students. Writers on Austrian education, too, have been misled by the figure of the pyramid. The pyramid, in fact, fails to give a correct impression of the development of education, because it brings into comparison things that should not be compared. If we must use a figure, we should prefer to compare the students to a column, which rests on a base of its own, and rises not from the elementary and middle schools, but, alongside of these, from the gymnasia. Complaints, therefore, about the falling off in the desire for higher education, based on such comparisons as we have mentioned, may be disregarded as resting upon no sound foundation. The desire for culture, in fact, does not permit of exact expression in figures, and certainly not in the method mentioned. The attendance at the universities, indeed, expresses in the main merely a desire for higher training in the departments of work requisite for professional life,* and the fluctuations in the attendance at the professional faculties to which we formerly drew attention, have nothing at all to do with the general desire for culture. The spread of the attendance at elementary schools, which has made great advances during the last 50 years alike in Austria and Prussia, proceeds alongside of the increase at the universities; but it had nothing, or to speak quite correctly, almost nothing, to do with increasing university attendance. The elementary school, however, forms an important part of our entire education system, and we shall take a short glance at its development, but only as complementary to the rest of our subject.

The attendance at the elementary schools in Prussia has steadily increased (with trifling fluctuations between 1837 and 1845), from 6·33 per 100 inhabitants, in the year 1822, to 8·10 per 100 inhabitants in the year 1882. The

* [See Appendix, Note 12.]

increase in the attendance at the elementary schools is thus greater than the increase of population. Hitherto there have always been children who escaped attendance at school. In 1882 the number of children of school age in Prussia of its present size was 4,759,937. The number educated at other than elementary schools was 385,481; 7,000 more fell to be deducted as wanting one or other of the senses,* and 27,500 by dispensation. This leaves about 4,340,000 who should have been at the elementary schools, while the number actually returned was 4,339,729, a difference of 271, which may be regarded merely as one of reckoning. For the future the attendance at the elementary schools should maintain a steady proportion to population, so far as the proportion of children to adults does not vary. These figures show also, when taken along with our former tables, that the increase at the universities has, since 1822, and also since 1864, been greater than that at the elementary schools.

Next above the elementary schools come the intermediate schools, comprising the Higher Burgh-schools, the Real-schools, and the Gymnasia. The schools called "intermediate" in a more restricted sense are merely Burgh-schools, due attendance at which does not, as in the case of the Higher Burgh-schools, carry with it a title to the restriction of the compulsory military service to a period of only one year. They rank, therefore, nearly as elementary schools, and are so classed in the Government returns. They have diminished in number, but have by no means disappeared. In 1881 the attendance at these intermediate schools and higher girls' schools was about 110,000; in 1864 the intermediate schools alone for boys and girls had an attendance of over 90,000. There is room for the complaint of statisticians on the step-motherly treatment accorded to these schools in the

* Viersinnig.

Government returns, as apart from returns about them a complete view of our intermediate education cannot be obtained.

The Higher Burgh-schools and the Real-Schools, it is well known, have gradually found a place between the elementary schools and the gymnasia. In 1832 they obtained a definite place in the education system, and they were further organized in 1859. They are declared to have "the common aim of furnishing a general scientific preparation for those callings for which the university course is not so well adapted." They have long enlisted the special sympathy of the public, as there was expected from them a speedier and more complete training for practical life; and Government has gradually, although slowly, invested them with greater privileges. The expression "Higher Burgh-school" formerly meant the same as Real-school. These schools were created by the individual burghs, out of lower Burgh-schools, and they showed different courses of study (Lehrpläne). The law of 1859 gave an official definition of the two classes of schools. The Higher Burgh-school is declared to be a Real-school so far as it goes, but without the complete system of classes I.-VI. The first-grade Real-school has a fixed *Lehrplan,* with Latin in all the six classes. The second-grade Real-school is allowed freer scope to adapt itself to local needs; but its certificate of maturity has not the same privileges attached to it as that of the first grade. Lately, too, Real-schools have sprung up with nine classes and no Latin.

By the order of 1832 the right of holding a leaving-examination was granted to only nine schools. This number had increased in the year 1857 to 58; in 1863 the number was 47; in 1868, 61: in 1873, 64; and in 1881, 68. Besides these there are three with nine classes and no Latin. There is a difficulty in comparing the "Intermediate"

schools, the Real-schools of grade II., and the Higher Burgh-schools for different periods, as for recent years we have a crowd of new categories* unrepresented in the earlier returns, and doubtless containing a number of scholars who would at an earlier date have been in attendance at some of the classes of the schools mentioned. We deem it sufficient here as indicating the development of all the intermediate schools together to give the returns for the Higher Burgh-schools, the Real-schools of the first grade (now called Real Gymnasia) and Real-schools of the second grade. These figures are given for the old provinces from the year 1859, and for Prussia of its present size from the year 1868.

In 1859—the date of the re-organization of the Real-schools—there were only 68 of these schools in Old Prussia with 20,853 scholars. By the year 1867* the number of schools had increased to 102, the scholars to 25,111; in 1880 there were 139 schools with 39,933 scholars. In Prussia, of its present size, the following figures mark the development since the year 1867 :—

	Higher Burgh Schools.		II. Grade Real Schools.		I. Gr. Real-Schools. (Real-Gymnasia).		With no Latin.	
	Schools.	Scholars.	Schools.	Scholars.	Schools.	Scholars.	Schools.	Scholars.
1867-8	65	10,130	14	4,125	64	22,892	—	—
1875-6	92	17,086	17	6,898	80	31,680	—	—
1880-1	101	16,389	19	7,249	85	30,822	3	1833

* In 1874-5 these new categories, including the agricultural schools, schools for fruit and wine culture, special schools for weaving and dyeing, &c., schools for instruction in wood-work, commercial schools, navigation schools, &c., had a collective attendance of 15,800 scholars.

*[In the year 1863, on the returns for which Mr. Arnold based his well known report to the British Government, there were 83 schools of the three grades with 20,732 scholars.]

	Total of Schools of the Three Categories.	Total of Scholars at these Schools.	Per 100,000 Inhabitants.
1867-8	143	37,147	154
1875-6	189	55,664	216
1880-1	208	56,293	205

These schools consequently have had more success in the new provinces than in the old. At the beginning of the *sixties* the number of Real-schools of the second grade was very large. They went down during that decade to nearly a fourth of their number, their place being taken by schools of the first grade. In 1860 the Higher Burgh-schools in Old Prussia were of very small account; but at present they comprise over a third of the scholars in the entire group. In the case of the whole group the increase, as indeed was only to be expected, was very considerable just after the re-organization; and as the schools were for the most part merely converted from a lower to a higher grade, the pupils were in large numbers withdrawn from the elementary schools and received a more advanced education, and in this way a real elevation of the level was attained. In the same way, too, the newly-established schools for special trades form a real gain in training for the people, as most of the scholars now attending these would otherwise have entered life direct without any opportunity of gaining practical as well as theoretical knowledge.

Since the middle of the *seventies*, however, a want of progress is observable, doubtless chiefly in consequence of the increasing competition of the gymnasia. By the orders of 1879 regarding the students at the State universities a new category has been recently introduced in the Real-schools without Latin. This class of schools, doubtless, will meet the wants of many

parents, and has a future.* It is no hybrid seeking to cultivate both the ancient and the modern, and satisfying neither; it is on principle distinguished from the gymnasia, and aims by quite another way, by modern languages namely, and mathematics and science, at providing a complete higher culture.

For the last ten years the champions of the Real-schools have been increasing their efforts to gain higher privileges for their schools. For the Higher Burgh-schools they have been demanding equality with the Real-schools, as regards the granting of the privilege of restricting the period of compulsory military service to one year, and for the Real-schools of the first grade they have been demanding more general equality of privilege with the gymnasia. In this way they are of importance for our special inquiry.

The course of recent legislation on the subject has been as follows. In 1870 the Minister von Mühler issued an instruction ordaining that so far as regards matriculation and enrolment in the philosophical faculty of the universities the certificate of maturity granted by Real-schools of the first grade should have the same value as certificates of maturity granted by the gymnasia. By a further instruction of 1879, and an explanation given by the minister in 1880, this was again limited by the restriction, that abiturients of the first-grade Real schools could only become fully matriculated students if they entered upon the studies more particularly noted in the instruction of 1870: otherwise they could only be matriculated in an exceptional way by special permission of the curators. This carried with it a distinct disability for the Real-school men in the philosophical faculty. It took from

* In the general orders of 1883, for the Higher schools in Elsass-Lothringen, nothing but Real-schools without Latin are contemplated for that part of the Empire. Let us hope that this procedure will find speedy imitation in the rest of Germany.

them the general permission to proceed to degrees, expressly granted in the circular to the curators of 1870; other restrictions, however, of the above instruction were even more important as regards the later State examinations for the office of schoolmaster. It is stated that candidates who have attended a Real-school, and after obtaining their certificate of maturity have attended the university for three years, will obtain the *facultas docendi* for mathematics, science, and modern languages, but can only be employed as teachers, without previous special permission, in Real-schools and Higher Burgh-schools. A further regulation of 1878 gives candidates permission to teach also German, Latin, history, and geography. But along with this it should be noted that the Minister in 1870 issued it as an instruction to the authorities for provincial schools, that in the election of schoolmasters a preference should be shown to those who had been trained at the gymnasia. The extension of the privileges of the Real-schools is thus, after all, only a very limited one; but in spite of this it has in a short time had a very decided influence upon the number of those at the Real-schools who pass the leaving examination, upon the attendance at these schools in general, and especially upon the number of Real-school men who, after passing the leaving examination, proceed to the university. This is shown in the following table:—

Year.	Total Number of Real * Abiturients.	Went to University.		Percentage of the Former to the Latter.
		Real Abiturients.	Gymnasial Abiturients.	
1870	419	5	2473	0·2 p.c.
1873	514	133	1897	7·0 ,,
1879	678	333	2474	15·5 ,,

* [That is, those who have gone through a complete course at a Real-Gymnasium, and have passed the leaving examination.]

The instruction thus at once sent a number of Real-school men to the university, but it was only in 1873 that the numbers became considerable,

The increase is very striking. The number of those for the last eleven years, who have finished the course at the Real-schools has more than doubled; but still this is only a very slight increase proportional to the increase in the number of scholars. In 1869 the entire course was finished by 10 per cent.; in 1879 the corresponding number was something over 12 per cent. Of those who finished the course at first, only $1\frac{1}{2}$ per cent. went to the university; in 1879 the proportion was nearly 50 per cent. Still more remarkable is the increased proportion which those who finish the course at the Real-schools form to those who finish the course at the gymnasia. At first sight the figure may not appear excessive, but it gains in importance when it is considered that this percentage relates to only a single faculty; in this faculty too it is centred in the study of a very few branches where the Real-school men already form the majority, and must in an increasing degree supplant the students from the gymnasia. This is the only result to be gained from the statistics. The attempts* to compare by statistics the success of the Real-school men with that of those from the gymnasia only seem to us to prove that the authors of these attempts have made the mistake of trying to get out of statistics what statistics can never yield.

The above numbers satisfactorily show that the question is pressing to an issue. Either the Real-school men must have an extension of their present privileges, and be allowed to study in a larger number of branches, or they must be deprived of some of the privileges they have so as to form a check upon over-crowding. A want of students in any

* Unsere Abiturienten, Steinbart. Berlin, 1878. [See Appendix, note 13.]

particular department would naturally be met by directing the stream thither if the channel were at all fitted for its reception. Such a want of students we found to exist at present only in Catholic theology; but we do not go into the question whether that is a fit channel to drain off our excessive numbers. As the result, however, of our whole previous inquiry, it appears to us beyond question that we must adopt one or other of the above alternatives with our Real-schools. It would be with open eyes to go against the sound course of historical development, if, when the universities are crowded to overflowing, we were to open new channels into them, or were to lower the standard of the demands made upon our students; and this, in the opinion of the vast majority of the teaching body at the universities, would, in the present condition of the schools, be the result of opening the university gates wider to the Real-school men.*

The Government entered upon the course of extending the privileges of the Real-schools, with the special aim of meeting a felt want of teachers, particularly of modern languages, and with the consciousness that they were making a retrograde† movement. As the want has been long ago met it is now open to them to reverse this course.

The effect of the changed position attained by the Real-

* [See Appendix, note 13.]

† In the Rescript of 1870 to the school authorities for each province it is said—"In the appointment of teachers of modern languages, even to Real-schools and Higher Burgh-schools, the governors are expected to take into their consideration that the more comprehensive acquaintance with language, and especially the more thorough grammatical training obtained at the Gymnasia, gives an advantage to those who have attended a Gymnasium.' It is well known that repeated petitions have been sent up to the department by the universities to have this preference cancelled.

schools comes strikingly out in the increased age of their abiturients, as shown in the following table :—

SCHOLARS AT THE REAL-GYMNASIA, ACCORDING TO THE AGE AT WHICH THEY PASSED THE LEAVING EXAMINATION.

	Total of Real Abiturients.	Under 17 years.		17 years.		18 years.		19 years.		20 years.		21 and above 21.	
		Total	p. c.	Total	p.c.	Total	p. c.	Total	p. c.	Total	p. c.	Total	p. c.
1860-68	1650	105	6·4	290	17·6	464	28·0	422	25·5	244	14·8	125	7·3
1869-73	1891	71	3·7	237	12·6	514	27·2	547	28·8	350	18·6	172	9·1
1875-79	2968	33	1·1	204	6·9	707	23·0	871	29·3	684	23·8	469	14·9

In the *sixties* there were 24 per cent. of the scholars under 18 years of age. At present the corresponding proportion is only 8 per cent.; and while 22 per cent. of the abiturients were then 20 years old or above that age, the corresponding proportion now is 38·7 per cent. Certainly in point of age matters are still more favourable than at the gymnasia. In the latter during the *sixties* nearly 53 per cent. of the abiturients were 20 years old, or above it, while from 1876-79 the number of such was only 48 per cent., and only 6 per cent. under 18 years of age. But this change for the worse, which is not observable at the gymnasia, is deserving of the utmost attention in the case of the Real schools. For what does it amount to? Either demands at the Real-schools have been substantially heightened with the view, where possible, of covering as much ground as the gymnasia, or the school course is completed by a larger percentage than formerly, and among these are more mediocre scholars who required a longer time to do so. The latter is doubtless the case. In the first period the leaving examination was not passed by more than 0·9 per cent. of the scholars, whereas in the last the corresponding

number was nearly 2 per cent. If this increase was contributed only by those who wished to go to the university, the loss would be no greater than at the gymnasia; but if those who meant to go into business were kept at school till so late a period of life—and this is beyond dispute—the loss is much more serious. It must be the general wish of scholars at the Real-schools to finish the course; but it is generally said that at present only rather more than one-third of the number can count on staying at school till 20 years old or more, and only then to begin learning their business. The attempts to bring up the Real-schools to give suitable preparatory training as well for the university as for the technical high schools, and for agricultural and mercantile occupations, cannot but make it necessary for all scholars who wish to get the utmost good out of the school to stay longer at it than can be afforded. In other words, it is extremely desirable that not only our architects, our higher postal officials, our foresters, &c., should go through the Real-schools, but also that our manufacturers, our merchants, our agriculturists in increasing numbers should attend these schools and finish their course, and thereby secure a higher and satisfactory education. But it will interfere seriously with our prosperity as well as with the claims of the occupations in question upon the exertions of the youth who follow them if the age of the abiturients is screwed up in the fashion mentioned.

Comparatively few farmers, merchants, officials, &c., can easily afford to maintain their sons so long. But, even if they could, it is conceivable that a far larger proportion of the parents prefer to withdraw their sons from school, so that, instead of passing their examination at the age of 20 or 21, they may then be in situations which support them. Hence, naturally, the small percentage of Real-school men

who go through the complete course. We are not rich enough to devote so many years to school, and hence it is that only extraordinarily few youths receive a complete school education, while by far the most of them break off at the middle of the course. The necessary result can be nothing else than that widespread half-education of which there is with good reason such general complaint. The Burgh-schools should be more generally utilized by the classes in question than hitherto.

For the youth themselves, however, the loss in our opinion is very considerable which is occasioned by this excessive prolongation of school life; but into this we shall go more at length later on when discussing the question in connection with the Gymnasia.

It is generally recognised that instruction in the ancient languages has any real value only when it is given thoroughly, and this is only possible at the gymnasia. It would be a compromise, therefore, with the requirements of the time if, in the lower classes of the Real-schools, some Latin were taught, enough, say, to familiarize with the use of the commonest Latin words (although on this, for our part, we lay no particular weight); and then in the upper classes the whole force of the teaching would have to be directed to science, modern languages, and mathematics. In no other way can the course at the Real-schools be conveniently shortened; but we return to this point later on.

From what was said before, a comparison between the attendance at the "Intermediate" schools and that at the universities would be of no value, and we therefore omit it.

For our present purpose the gymnasia are of far greater importance than the schools we have hitherto noticed. They are the preparatory schools for the universities, and stand in the closest connection with them. Here, too, we

had considerable difficulty in making homogeneous comparisons, as sometimes only institutions with the six higher classes are reckoned as gymnasia, and sometimes the pro-gymnasia * are so reckoned. Sometimes even the scholars at the preparatory schools (Vorschulen) are counted as belonging to the gymnasia and sometimes not. We have gathered our information from a great variety of sources, and have taken care in the development exhibited in the accompanying table to offer only homogeneous comparisons.

Year.	Number of the Gymnasia.				Number of the Scholars.					
	Excl. Pro-gymnasia.		Incl. Pro-gymnasia.		Excluding Vorschulen.	Per 100,000 Inhabitants.	Including Vorschulen.	Per 100,000 Inhabitants.	Including Pro-gymnasia and Vorschulen.	Per 100,000 Inhabitants.
	Total.	1 Gymn. to Inhabs.	Total.	1 Gymn. to Inhabs.						
1830-1	101	118,181	133	97,744	—	—	24,224	186	—	—
1863-4	145	131,724	171	111,696	43,899	229	47,961	251	50,563	265
1880-1	205	109,640	238	94,442	62,905	280	72,387	322	76,474	349
Incl. the new provinces.										
1868-9	198	121,717	227	106,167	57,171	238	64,218	266	67,512	280
1880-1	250	109,200	285	95,789	73,922	278	84,911	311	89,283	320
Incl. the new provinces, proportion to the year 1868-9 = 100.										
1868-9	100	—	100	—	100	—	100	—	100	—
1880-1	126	—	126	—	129	—	132	—	132	—

At the beginning of the period over which our inquiry extends there was already in Prussia a relatively large

* ["Pro-gymnasiums are merely gymnasiums without their higher classes. Most pro-gymnasiums have the lower and middle divisions of a gymnasium, four classes; some have only the lower divisions and half of the middle, three classes; some, again, have all the classes except *prima*. The pro-gymnasium follows, so far as it has the same classes, the *Lehrplan* of the gymnasium. In the small towns, where it is not possible to maintain at once a pro-gymnasium and a *Realschule*, the pro-gymnasium has often parallel classes for classical and for non-classical studies."—*Higher Schools and Universities in Germany*, p. 13.]

number of gymnasia; and it is certainly not the result of mere accident that, at the beginning of the *thirties* and at the end of the *seventies*, at each of which periods we showed an overcrowding of students to exist, the gymnasia were then also in proportion to population most widely spread over the country. In the period falling between these two dates the various grades of the intermediate schools successfully competed with them for a series of years. Since the *sixties* a great deal has been done for the wider spread of the gymnasia, and yet the number of scholars has increased in a greater proportion. In 1864 each gymnasium (including preparatory schools and pro-gymnasia) had an average of 302 scholars; in 1881 the average number was 307. In 1869 the average number at each gymnasium in Prussia of its present size was 289; in 1881 it was 295. The newly-erected gymnasia, therefore, have been well utilized. Were there everywhere another higher school alongside of the gymnasium the wants of the country could no more than be said to be supplied. In many places, however, no special need was felt but that of giving the children the chance of an education going beyond the range of the elementary school; and had Real-schools been erected instead of gymnasia they would doubtless in many cases have been gladly utilized. The press to the gymnasia may thus in some measure have been artificially produced.

Since the *fifties* the increase in the attendance at the gymnasia has been far greater than that of the population. This is particularly noticeable since 1868 in Prussia of its present size. In the middle of the *thirties* there was a falling off here as at the universities; but it was sooner made up, and the training of the gymnasia found a wider acceptance than that of the universities.

It may occur to some, however, that this phenomenon may

be attributable to a larger attendance at the lower classes of the gymnasia; and in view of this possibility it is of importance to compare the total attendance at the gymnasia with that at the highest classes, and the latter again with the abiturients. From this comparison, which we limit to the gymnasium proper, that is, the six highest classes, we gather that, for the whole period of our inquiry, and in the old provinces, as well as in Prussia of its present size, the scholars at the highest class have generally formed between 10 and 11 per cent. of the total number at the gymnasia, although from the *thirties* to the end of the *fifties* the percentage was steadily a little over 11. With the largely-increased numbers, this of course means that the lower classes really exhibit that preponderance of which there has lately been so much complaint. More scholars, that is to say, now remain sticking in the lower forms than formerly; the lower classes are attended by a number of scholars who have no intention of completing the gymnasial course, or who have not the capacity to do so. Since the end of the *sixties* and the beginning of the *seventies* there has no doubt been some improvement; but, as compared with the *thirties* and *forties*, the movement in the opposite direction is very striking.

Compared with the increase of population, that of the highest class at the gymnasia has been considerably greater.

In the *thirties* we find 18·3 for every 100,000 inhabitants.
In the *fifties* „ 23·1 „ „ „
In the beginning of the *seventies*, 25 „ „
In 1880 „ 31·5 „ „ „

We lay, of course, considerable stress upon these figures. They show clearly that classical training has been carried

considerably further, and has been spread over a substantially larger number of people than formerly; not merely that this has been attempted, but that it has been accomplished.

Our further inquiry brings us to the arbiturients, or those who pass the leaving examination. The following table gives the number of those who passed this examination, including those trained elsewhere than at the gymnasia :—

Year.	Number of Gymnasial Abiturients (incl. extranei).	Abitur. per 100,000 Inhabitants.	Prussian Students at German Universities.	Per 100,000 Inhabitants.	Number of Students for 1 Abitur.
1835	1019	7·0	—	—	—
1861-5	1935	9·9	5,484 (?)	28·6 (?)	2·83 (?)
1880	2406*	10·3	10,108	44·9	4·20
Including the new provinces—					
1869-73	2510	10·2	8,050 (?)	32·8 (?)	3·20 (?)
1879-80	2906	10·6	11,600 (?)	42·8	3·99
1880-81	—	—	12,750 (?)	46·7	4·31

* In Bavaria the gymnasia are constituted on a different basis from that on which they are constituted in Prussia, containing as they do only the four highest classes. Alongside of these stand the Latin schools, which are in some cases isolated institutions and sometimes simply pro-gymnasia, in connection with the gymnasia. These likewise consist of four classes. In the years 1867-72 there were 28 gymnasia, with the same number of Latin schools attached to them, and 41 isolated Latin schools. In Bavaria the increase in the attendance at the higher schools is not great. In proportion to population, indeed, there is a slight decrease in the last fifty years. In the year 1833-4 the attendance at the gymnasia was 2,334, or 54·8 per 100,000 inhabitants; in 1869-72 the corresponding figures were 2,627 and 54·2. In the last-mentioned period the number of abiturients was 694, and as there were for the same period 1,835 university students in Bavaria, the proportion of the one to the other was 1 : 2·64. In the years '52-62, the number of abiturients was 13·1, and from '69-72, 14·2 per 100,000 inhabitants, and, consequently, higher than in Prussia. The standard, however, is not so high in Bavaria as in Prussia.

In Saxony (kingdom), in 1881, the number of scholars at the gymnasia was 5,098, or 171·5 per 100,000 inhabitants. In Würtemberg for the same year there were 91 learned schools, with 9,064 scholars, or 460 per 100,000 inhabitants; but of these only 3,536, or 178 per 100,000 inhabitants, were learning Greek.

Since the middle of the *thirties* a steady increase in the number of abiturients has taken place in proportion to population. Of late years, however, they have been outstripped by the number of students, partly by the lengthening of the course and partly by the increased influx of Real-school men and also of *immaturi*. We must wait to see what form this will take in the coming semesters.

In comparing the abiturients with the total number of scholars, and with the number in the highest class, we cannot fail to be struck with the decreasing percentage of the abiturients. The earliest dates probably contain the scholars at the preparatory schools, but this only serves to make the difference all the greater. In the *thirties* the abiturients formed 5·2 per cent. of the total number of scholars at the gymnasia, and 48 per cent. of the highest class. In the *sixties* the former percentage had gone down to 4·3 and the latter to 42. In 1880 there was a further decrease in the former percentage to 3·8, and of the latter to 34. In these figures we have a further illustration of the fact above proved, that at present a smaller number than formerly of the scholars at the gymnasia complete the course. Desirable as is the spread of training in the classics at school, it appears to us, as above stated, a more than counterbalancing drawback, if an always increasing number of youth stop half-way on their school course, and so fail to receive a complete education. The normal state of things unquestionably is that every one should complete the course of the school which he attends.

The proportion of abiturients, finally, who do not go to the university deserves particular notice. On this point, unfortunately, we have not complete official returns for our whole period; and it is, moreover, to be remembered that the numbers do not exactly express the facts, as youths fre-

quently change their minds after giving in their returns. From 1821-4, of 838 abiturients only 18, or 2·1 per cent., did *not* go to the university. In the latter half of the *thirties* this percentage rose to 14. From the middle of the *sixties* to the middle of the *seventies*, it was as high as 20·6. In the year 1876-9 it went down again to 14·4. In these percentages there comes out the increased inclination of late years to a university course, after other careers were overfilled. From 1864-75 a far more considerable number than formerly passed the leaving examination without going on to the university. The increase of the army and the great military success of Prussia, or rather of Germany, had something to do with this, as a considerable number of the abiturients were thus induced to enter the army with the intention of becoming officers.

We have thus presented the statistics on our school system, and have discussed each part of that system separately; it now remains to give a connected view of the whole. This will be better done, not in the form of a pyramid, but of parallel columns, starting from the *thirties*, and taking population as a basis. Occasional gaps it will be necessary to fill up by conjecture, as has been repeatedly done already; and figures which exist only for particular years are taken as standards for the average of several. To balance the extraordinary fluctuations as much as possible, we take the averages for entire decades.

As was only to be expected, the different educational institutions exhibit a different development. The common schools in point of attendance have only exceeded by a little the growth of population. The fluctuations in the intermediate periods must only be assigned to the incompleteness of the numbers, and to the inequality of the years taken as the standard. The increase of the higher burgh-schools and

Real-schools was twice as great, and almost as great was that of the gymnasia. As already said, it is this which we regard as the principal gain of the period. The higher-school education has largely gained ground among the population. A number of schools, as explained below, are not represented in our table, the lower intermediate schools namely, and the schools for special trades, &c. The former have fallen off, but the latter of late years have made important advances, so that the inclusion of them in the table would make the result appear decidedly more favourable than it is.

TABLE SHOWING EDUCATIONAL PROGRESS IN (OLD) PRUSSIA COMPARED WITH THE YEARS 1831-40 = 100.

Years.	Population.	Scholars at the Elementary Schools.	Higher Burgh and Real-Schools.	Gymnasia excl. Progymnasia, incl. Vorschulen.	Highest Class at the Gymnasia.	Abitur. of the Gymnasia.	Students at German Universities.
1831-40	100	100	100	100	100	100	100
1841-50	114	112	129	116	—	107	96
1851-60	125	125	187	151	160	139	99
1861-70	139	133	229	209	184	163	109
1871-80	153	159	317	275	228	180	145
1880-81	160	165	333	312	272	197	173
			Per 100,000 inhabitants.				
1831-40		7812	85	165	18	9	38·7
1841-50		7544	97	168	—	8	34·1
1851-60		7665	128	199	23	10	33·1
1861-70		7318	141	249	24	10	33·6
1871-80		7894	176	295	27	10	40·8
1880-81		7911	178	324	31	10·5	46·8

In the higher ranges of education the column becomes smaller and smaller. In point of increase the highest class comes behind the number at the gymnasia, and the abiturients come behind the highest class. Compared with population, however, there is considerable increase in the number of abiturients. From 1841-50 to 1880-1 the population

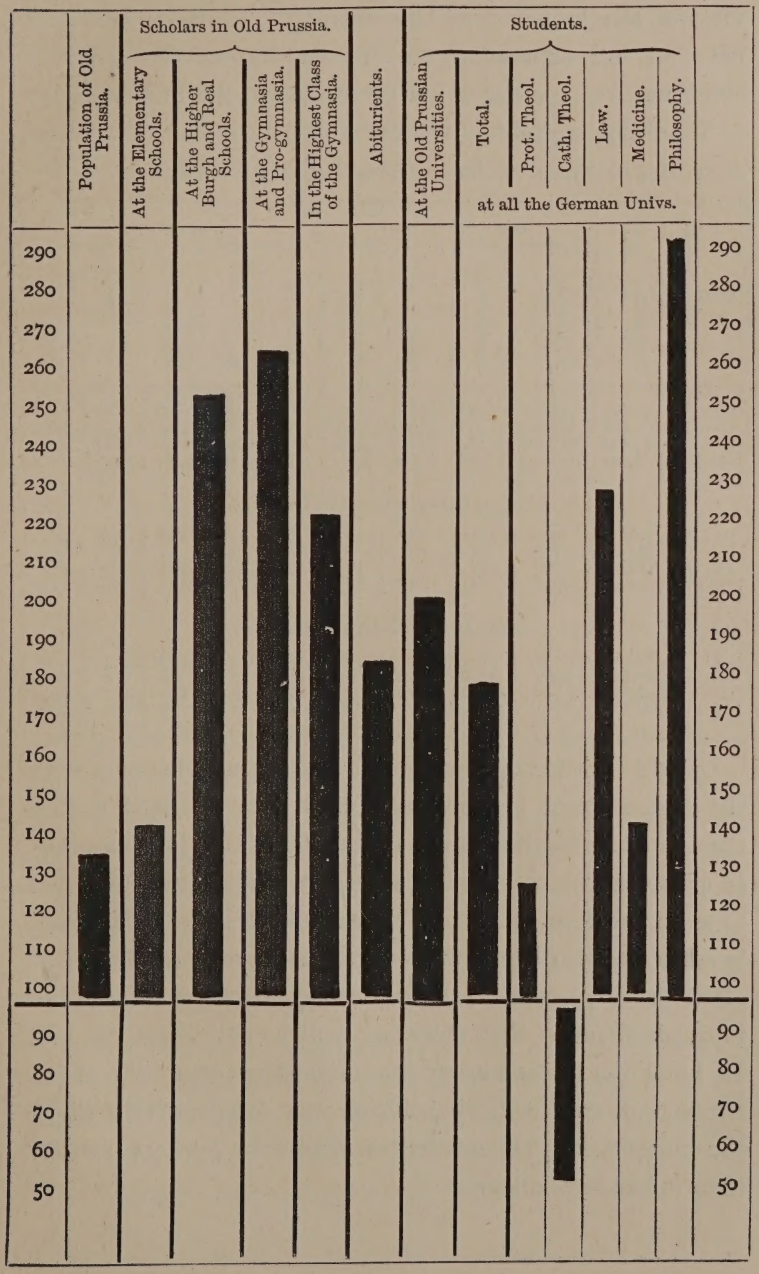
increased 46 per cent., while the increase of the abiturients was 90 per cent. The proportional increase, however, is not so great as in the highest class, and considerably smaller than in the numbers at the gymnasia. The students naturally keep pace with this increase, although quite recently they have taken an unusual upward bound.

In making a general comparison it will be of advantage to start from the *forties*. For this purpose we present, in addition to the above table, a diagram (p. 237) showing from the *forties* the development of all branches of our education system. For the point of departure the numbers at the highest class could only be given approximately, so that that column does not rest on quite so sure a basis as the rest.

The increase in schools for the higher education is by far the most striking feature of the diagram. The increase here outstrips that of the elementary schools almost as much as it does that of population. There is clearly therefore no ground for the "serious misgivings" of which we have heard so much, that the broadening and deepening of culture are on the decrease, but rather the contrary. The fluctuations in the increase are naturally the greater the higher the school stands. They are most strongly marked in the universities. Here, indeed, strong upward and downward movements are observable, because the universities are in the main professional training schools, and are, therefore, subject to the fluctuating conditions of the professions.

The diagram shows that the Real-schools and the higher burgh-schools have increased largely since the end of the *sixties*. They competed, indeed, in some measure with the gymnasia, but these latter exhibit a largely-increased attendance in the latter half of the *seventies*. Of late, however, the universities have far outstripped the schools. It is a well-known fact, which our present inquiry has put beyond a doubt,

ATTENDANCE IN 1841-50=100 COMPARED WITH 1880-1.



that the increased attendance had caused an overcrowding in most of the branches of the university course. This does not find full expression on the diagram, as the point of departure was one not at all favourable to the universities.

The following table gives for Austria a set of facts corresponding to those we have already given for Prussia :—

Year.	Population.	Scholars at the				Students				
		Elementary Schools.	Real-Schools.	Gymnasia.	Commercial Schools.	Theology.	Law.	Medicine.	Philosophy.	Total.
1851	18,206,000	774,283	4,455	21,175	3,108	2,657	2,681	2,040	593	7,971
1861	19,029,000	872,850	9,223	27,039	3,089	1,934	2,408	1,298	602	6,242
1871	20,696,000	942,497	15,822	30,631	4,163	2,874	3,211	2,789	1,380	10,254
1880-1	22,144,000	1,182,352	25,918	40,148	4,488	1,092	4,778	2,057	1,851	9,778
Comparison with 1851 = 100.										
1851	100	100	100	100	100	100	100	100	100	100
1861	105	113	207	127	99	73	90	64	102	78
1871	114	122	355	145	134	108	120	136	233	129
1880-1	122	152	582	189	144	41	178	101	376	123
Per 100,000 Inhabitants.										
1851	18,206,000	4,252	24	116	17	15	15	11·2	3·2	44·4
1861	19,029,000	4,586	48·5	142·3	16·4	10·2	12·7	6·8	3·2	32·9
1871	20,696,000	4,553	76·4	148·0	20·1	13·9	15·5	13·5	6·7	49·5
1880-1	22,144,000	5,339	117·3	181·6	20·3	4·9	21·6	9·3	8·4	44·2

Chiefly for the reasons formerly stated in connection with the philosophical faculty we cannot here go back farther than 1851. In the case of the universities it is misleading, as above shown, to pick out a year at random and from that to trace the development. The attendance at the universities is subject to too great fluctuations to permit of that; but after we have taken all the circumstances of the universities into consideration this drawback will be of less importance. In 1851 the attendance at the universities, especially in the theological and medical faculties, was comparatively high; the increase at the universities therefore appears smaller than it has been all over.

The increase at the elementary schools has been considerably greater than that of population. By far the largest increase, however, is in the Real-schools, which only began to develope as late as the *forties*. In '41 they were represented only in three provinces, and with a total of 563 scholars. The percentage of increase, therefore, is very considerable after these schools drew special and general attention. Even in 1851 the Real-schools in Austria seriously affected the Gymnasia. In 1846 the Gymnasia had 25,701 scholars; the number in 1851 was smaller by 4,000. The decrease was nearly as great as the total number of scholars at the Real-schools in 1851.

In proportion to population the attendance at schools of all sorts is considerably higher in Prussia than in Austria; but we do not, especially in the case of the Gymnasia and Real-schools, attach great importance to the comparison, as we are not sure that we are comparing quite homogeneous things. The table rather is only of importance as indicating the historical development in Austria itself. And who would deny that it is highly gratifying? The preponderance of the Gymnasia over the Real-schools has considerably diminished, and it is considerably smaller than in Germany. In the latter country in 1880-1 the scholars at the Real-schools formed 55 per cent. of those at the Gymnasia; in Austria the corresponding percentage was 64, while in 1866 it was only 37.

The technical and commercial schools have long held a prominent place in Austria. Their attendance, indeed, has increased still more strikingly than that of the universities, and these again have no more than kept pace with the population, although they have remained in their increase behind the schools. But we are far from regarding this as in any way an unfavourable symptom.

CHAPTER XV.

THE PRUSSIAN SCHOOL SYSTEM IN ITS BEARINGS ON THE NATIONAL ECONOMY.

LET us now look more closely at the question, what educational development is to be regarded as the most favourable when viewed in its bearings on the national economy, and whether the system existing in Germany corresponds exactly with what the nation needs.

We must at the outset make a distinction, first between the elementary schools and all the rest, then between the intermediate schools and the gymnasia, and lastly between the schools on the one hand and the universities on the other. We saw above that elementary school education in Prussia is not only obligatory by law, but that at present the number of children of school age nearly agrees with the number actually at school. In this one respect we have pretty well reached our goal; there is no room for any substantial advance. Not that the Prussian elementary school already accomplishes everything that can be desired from it. Of the men recently enlisted in the Prussian army over 2 per cent. were found without school education, that is, although the majority of them had actually attended school there were still in the year 1881-2 2,169 of the recruits who had obtained no school education, or next to none. In Posen* the proportion was

* In the Eastern provinces a great difficulty in elementary education is occasioned by the differences of language.

close on 10, and in Western Prussia it was nearly 9 per cent. The progress no doubt from year to year was very considerable. In Posen late in the *thirties* the proportion was 43 per cent., in the *fifties* it was reduced to 19 per cent., and in 1870 it was 14 per cent. In all Prussia in 1873 it was still 4·5 per cent., and in 1879 it was 2·6 per cent.*

It is well known that even yet our education system is not without its weak points. Cases, for example, are only too common in which a single teacher has under him a crowd of children to whom he cannot possibly do justice. In rural districts, also, irregular attendance is only too general, and in the intervals of school attendance the children forget what they had previously learned. The opposition of parents to the school laws and the laxity of school authorities in watching the attendance have never yet been satisfactorily overcome, and so the children actually attending the school do not in all cases really master the elements. Every advance in these respects is a distinct educational gain.

The same remark applies to the further teaching of higher subjects in some of the common schools. Some of these schools, intended for the mass of people, are no longer content with teaching merely the elements, but aim at giving at least the initiatory stages of the principal branches of the higher education. In this way, too, the educative capacity and the productive power of the people on the whole are promoted.

It is at present with our working-class in general as with the individual soldier in our present system of war: there is

* [Compared with other countries, Prussia, it may well be thought, has every reason to be satisfied with the results of her elementary school system in the education of her recruits. Among Swiss recruits the canton of Geneva, which is superior to the rest, shows 15 per cent. of incompetents. In a recent test applied to the Belgian recruits no more than 3 per cent. appeared to the Commissioners to have received a competent primary education. The test was by no means a difficult one.]

in both cases much greater scope than formerly for independent thought and action. From knowing only the new state of matters, we have lost the standard for estimating the greatness of this change, and an idea of it can only be formed by going back with the elderly people among us to former decades, or by a comparison with different countries. The present writer has directed special observation to this point, and has established the superiority of the workmen in the west as compared with the east, and also the superiority of the German as compared with the English workman. No doubt the Englishman, by his enormous perseverance, and his wonted diligence and sense of order, gets through considerably more work in the sphere of action to which he has been long accustomed, but he is far behind the German in capacity of adapting himself to new circumstances and in executing on his own reflection and independently a complicated task. The same feature is noticed as well among artisans as among factory workers, and we have been repeatedly confirmed in our opinion by large English employers of labour who knew Germany well, and by German workmen who had lived for years in England. This, however, is only the result of the better and more general mental training which our working-class obtained in our schools, and especially in the better class of our lower burgh schools. An increased attendance at these therefore is in general to be encouraged.

The limit to this is evidently found in the circumstances of the parents. The raising of the standard involves the most extraordinary sacrifices. The raising of the age for compulsory school attendance from the fourteenth to the fifteenth year would lay upon our working-classes a heavy burden, which in many districts it would be impossible for them to bear. It would mean the withdrawal of their children for an additional year from self-support, and would

oblige the parents to support them for this time longer. Then the number of school children would be increased, which of course would imply a still larger increase in the teaching staff, and as there is already wide complaint on the pressure of the school taxes, any extension in this direction is not to be looked for in the immediate future.

A further limit in the sphere of the national economy is to be found in the danger we run of so extending education as to create wants that cannot well be satisfied and capacities for which no sphere of activity can be found. The inevitable result of this must be discontent with existing conditions and with one's earthly lot.

Our school training, in fact, is mainly directed to the development of the intellect and to the widening of the ideas. It is calculated, therefore, to increase the capacity for enjoyment—to refine our wants, but at the same time to increase them. Unless a want of harmony is to be the result, these wants must be satisfied, and this can only be attained by raising the condition of the people, which again presupposes higher production on the part of the masses. We said above that school training was fitted to improve the work of the labouring classes, but this of course is not always the case. The mere mechanical worker, the ploughman, the labourer, &c., will not do more or better work by reason of his school training, and the same is true of the lower factory hands. But notwithstanding this it is desirable from an ideal point of view to raise these to a higher intellectual level. This, however, can only be done without disadvantage when along with the training of the intellect there is training also of the character and the feeling, through correspondingly improved schools and through the influence of the family and the church. We must, in other words, have a harmoniously developed education to give scope for a conception of life

which regards life's functions as consisting in the fulfilment of duty, in work, and in submission to what is sent by a Higher Power; although this, unfortunately, in the present day is, from a want of religious feeling, more and more seldom seen. For all this, however, school training is the best foundation. It may be regarded as a counterpoise* when the rest of the population by intellectual exertion, and especially by their inventions and discoveries, are able to increase the output of the national work to an extent that renders an increase of wages possible; although, no doubt, the same end might be gained by a change in the distribution of income. In our time the school training of the working population has rapidly increased and the counterpoise mentioned has been wanting, and the consequence is that we have upon our hands a "social question" which finds its origin in the disproportion between our wants and the means of satisfying them. This we regard as the real basis of the whole movement, although, of course, other factors must have entered to present the phase of the question which we see before us to-day.

The improvement in the position of the working classes, therefore, is the necessary correlative of the elevation of the common school system. At present we regard these two things as about on a level, and we may, in our opinion, feel no anxiety in taking a step forward in the education of the people. It will doubtless, however, be all the more incumbent on us to supply everything that can serve in the way of the counterpoise. In this connection may be mentioned the increase of wages, the shortening of the hours of labour, the better observance of Sunday, the stimulating of the religious feeling of the workman, and resistance to socialistic notions.

* [That is, on the one hand, to the loss of time spent on school training by the classes above referred to, and, on the other, to the cost to the State of the education of those classes.]

These last, for the most part, are calculated to check the feeling of individual responsibility for action and movement, not only for the moment but for the remoter future as well, and to rob of all satisfaction in the fulfilment of duty.

We said above how important we regard the spread of schools above the elementary stage; this of course was on the supposition that they are taken advantage of by the classes who have hitherto been content merely with the elementary schools. The demand of our age is for an increasing number of more intelligent workmen; we need also youth of higher intelligence in commerce, and a better educated peasantry. In the great mass of the lower officials, too, a raising of the level of school training is highly desirable, not only for the sake of the higher practical capacity they would thereby bring to their work, but more especially with the view of raising the moral tone. This a higher school can effect much more easily than the elementary school.

The schools we have still to consider have to prepare for two distinct classes of occupations. The one of these classes has to do with practical activity, and is connected with business and commercial life; the other works in the service of the State and of knowledge. For each class a different training is required. The point of union between the two is found in a number of branches of the public service, some of which do not require a higher systematic training, while for others such a training is indispensable. The schools we mean are the Real-schools, and the learned schools or gymnasia.

The function of the former is in the main to give a rounded-off and finished education within themselves. The majority of the scholars on leaving the Real-school do not continue their education, but go direct into the business they

mean to follow, although without special instruction in any particular line, such as could be got in the special trade schools. The gymnasium,* on the other hand, does not undertake to finish education; it leaves this to the university, which stands between school and professional life. It is in our opinion the ignoring of this distinction that has led to most of the mischief in our education system. The public have insisted on the gymnasia giving a finished education for life, and they have claimed, on the other hand, for the Real-schools the right to prepare for the university, and to have their instruction recognised for entrance to the posts for which a course at the university is preparatory. The consequence would be that to give a finished education for life the gymnasia would have to do too much, and to undertake the teaching of some of the things formerly taught at the universities, in order to give some of this instruction to those who do not take a university course. The Real-schools, again, are forced to screw up their standards to meet the demands of the universities, and those who do not wish to go to the universities are overburdened. In both cases the vast majority suffer for the sake of the minority, although neither do the minority receive their full amount of benefit.

The aims of our time seem, as above stated, to be directed at shortening the length of the course in the Real-schools. This is only possible by the omission of Latin; were this

* [The author here quotes at considerable length in support of the distinction stated in the text between the essential functions of the Real-schools and the gymnasia from the work of Wilh. Schrader (for many years a member of the School Council for the Province of Prussia)—"Erziehungs- und Unterrichtslehre für Gymnasien und Realschulen," 2nd edition. Berlin, 1882. There is great probability that the distinction is, historically, a correct enough one, but in practice it is scarcely possible that it can ever have been strictly observed. Indeed, the author's complaint is about the large numbers who prefer the training of the gymnasia, while they have no intention of entering professional life.]

done, the whole course of the school will be able to be got through. The gymnasia must again be treated as in a more especial degree preparatory schools for the universities. We shall then be in a position to avoid the present general complaints on the breaking-up of the course, on the overloading of the scholars with scraps of knowledge, on pressure of home work, and on too long hours at school. A further result of this would be the devoting of special attention to the spread of the higher burgh-schools, and Real-schools with no Latin. The population would then be able to take general advantage of these, while the gymnasia should have to be brought back to their proper function of supplying the universities. The consequence of this would be—the very desirable one in our opinion—that youth intended for business careers would steer clear of the gymnasia.

Let us look at this a little more in detail without going into the particulars of the *Lehrplan*, but confining ourselves to the figures we have already supplied.

Attendance at the gymnasia—that is, the completion of the curriculum, which we regard as the aim of attendance—appears to us highly doubtful as the best course for youths intended for business. The curriculum is too long. We saw that nearly one half of the abiturients at the gymnasia at the present time were twenty years old or more, and that nearly the fourth part were over twenty years of age. This late age of beginning must render them less fit for what is required of them in business. We say nothing of the too well founded charges about the small development of the faculties of observation gained in the gymnasial course; there would not be much in these if the youth were free to choose his course at the age of sixteen or seventeen. But there can be no doubt that constant abstract thought at that time of development must seriously impair the aptitude for business

and lessen the capacity for taking large views, if school education is continued till the youth is twenty or twenty-one years of age. From sixteen to twenty the power of imitation is at its best; and artistic capacity will be powerfully checked if youth of ability are forced to devote this important time to book work instead of utilizing it to increase and foster their talent. The right moment is gone and can never be recalled.

The same is the case with the merchant, the farmer, the manufacturer. Only in rare cases will the abiturient who intends to follow any of these occupations see the necessity or possess the determination to go through a thorough apprenticeship; and yet this, as he will take more time to master the details, is more necessary in his case than it is for the youth who goes into business at seventeen. There is diminished interest for details; it requires more resolution to go through the weary routine of daily work with thoroughness, and to undertake even the inferior duties. It is said that the youth who volunteers for the one year's service submits to such duties. This is true, but it is the result of a stern necessity which can only in a few cases be similarly applied. In most cases the place of the apprentice is taken by the *volontair* with no fixed duties, and with no responsibility, who frequently gives his attention only to what is interesting in the work, and so gains only a surface knowledge and not a thorough acquaintance with the business he is learning. Masters, too, often leave such charges to look after themselves, the consequence being as we have stated.

The ideal value of the training at a gymnasium is, and naturally continues to be, an infinitely high one. It improves the moral tone of the people, and no one will deny that the spread of the gymnasia in proper circumstances is to be regarded as a blessing. The gymnasia, indeed, have been so often praised that we deem it unnecessary to say

more on the subject.* Families in comfortable circumstances, therefore, are completely justified in letting sons intended for commerce, industry, or farming take the full course at the gymnasium, and even go to the university before entering practical life. If required to take the principal oversight, or a share in the direction, of an old and well-established business, they may fairly well cope with all the duties that will be required of them; and there can be no doubt that the training of the gymnasium is better than any other for preparing men to fill with credit honorary public posts. Such a course, however, would hardly be justified for the majority of families who are obliged to struggle for existence, and in whose case the first object of a son is to get a situation. A striking proof of wrongly-directed education in this respect is to be seen in the financial decay and frequent ruin of our aristocratic families not secured by entail. By way of preparation for the management of their estates the representatives of these families often take a course of law at the university or are trained to be officers in the army.

From the want of thorough training, too, there can be nothing but lessened or only partial interest in their work. The youth who has concentrated all his attention till his twentieth or twenty-first year, or even longer still, on the ancient languages, or has taken a course at the university, will find it difficult to pass to a business career, and to find complete satisfaction in it.

* [Very many of the facts above adduced by the author are a clear evidence of the disposition of the public in Prussia to sympathize more with these liberal admissions of the value of the gymnasial course than with the author's arguments against it. The arguments, in fact, are simply in substance what was urged centuries ago by Montaigne and Locke. That these arguments, however, had force is shown by the existence of the modern Real-school. What it is important to notice is, that the gratifying development of the Real-schools in Prussia has not interfered with the development of the gymnasia.]

A training of this sort no doubt widens the sympathies and capacities for enjoyment; but it also creates intellectual wants which a farmer, a merchant, or a tradesman in narrow circumstances cannot satisfy. The consequence—a widespread one in these days—is by general experience a life out of harmony with its surroundings, and a constant effort to get near to the great intellectual centres. The majority are no longer content to live in small places, in a sure if modest sphere. If they are obliged to do so, and have the sense to live according to their means, the consequence in most cases is a settled discontent with their allotted fate.

In most occupations, moreover, our usual school training has only a very limited influence in increasing producing power that can be utilized in the national economy. The people, however, who have enjoyed this education are precisely those in whom the wants referred to have materially increased, and in this way a disproportion has too frequently been created between their power of production on the one hand and their wants on the other.

The outcome of what has been said is that no worse course can be taken than that of screwing up the standard of school education in a one-sided direction without due consideration of what the effect of this will be. But it is of very special importance to avoid half education, which cannot fail to result when a very large proportion of the scholars leave school in the middle of the course.

We readily admit, of course, that there are exceptions where the business man receives no harm from an advanced and long education. A youth may take to his father's business: the son of a landed proprietor may pick up estate-management in the holidays: the manufacturer or the merchant may in a great variety of methods introduce his son to the ways of business, and the complete estrangement from

a business life attendant upon a long school course may thus be avoided. The result in such cases may even be highly favourable; but they are notoriously exceptions. The Jews are the best instances of this; but then their natural turn for business and their keen eye for their individual interest render the risk in their case smaller. The Jews are often referred to as an example of what an advanced education can produce, and their successes are often adduced to prove that such an education is the best preparation for a business career. But it is not perceived that the Germanic races, as represented among us in Germany, have rather a nature that aims at the ideal, while they lack the practical business capacities to produce the result attained among the Jews.

It is sometimes said, in fine, that in more important concerns men trained at the gymnasia come constantly to the front. But for this they may have to thank not so much their gymnasial training as their higher social position.

The fact, however, is becoming more and more generally recognised that our trading and commercial classes, by attending only the lower classes at the gymnasia, are receiving an insufficient education, which seriously interferes with their advancement. They would, in the same time, make really greater progress at a school of lower grade. They would at least at such a school have gone over a course that would have led them to the higher classes, which seems impossible for them at the gymnasium. For these classes of the community the gymnasia are thus the direct cause of the complaints of insufficient education. The Latin or Greek that has been learned is sufficient no doubt to support the conceit of a supposed education; but it is not sufficient to meet the requirements of business. To put

within reach of these classes a higher education, complete in itself and adapted to their occupations in after-life, appears to us one of the chief requirements of our time. Nor are indications wanting that our Government recognises this want, and is doing its best to supply it. But public opinion requires to be enlightened and impressed with the urgency of the question. The raising of the standard of education, and more especially of that at the gymnasia, is no doubt a very desirable object: it means the widening of views and the spread of a more ideal conception of life; but it is only to be justified when it is promotive of the national well-being.* A too prolonged school attendance has a further disadvantage which, affecting as it does the bodily development of our youth, appears to us of very serious importance. This is not the place to go specially into this question; we must content ourselves with a few remarks. From professional pens there is abundance of complaint on the bodily deterioration of our youth. Only in comparatively few cases have the parents the necessary knowledge and opportunity to secure due proportion between bodily exercise and mental work, and yet the increase of what is injurious to health in the life of our large towns renders the preservation of such proportion more than ever necessary. In Switzerland we have an excellent example of how the action of Government can be made to tell towards making a certain measure of bodily exercise compulsory; and only when our Government gives better heed to the extension of such exercises in our schools will the danger, which appears to us an exceedingly serious one, be lessened.

* [The "classical controversy" still goes on with as much vigour in Prussia as at the date of Mr. Arnold's report 20 years ago. There is a good deal of fanatical writing on both sides. The controversy is rendered more acute in Prussia than among ourselves, from the position in which Government stands to the higher education and to the professions.]

It cannot, of course, be regarded as the duty of Government to set itself against the tendency of the time, and to oppose the desire for higher education. Whoever has the desire, on his own account and at his own risk, to advance his sons to a higher social position, should have the opportunity of doing so; and more, indeed, than hitherto it should be seen that the higher schools do not remain closed against the able poor. All that we object to is the spread of half-education, the artificial application of the screw to increase the attendance at the learned schools, and the one-sided and unjustifiable favour that is displayed towards the higher classes. This wrong tendency is observed—

(1) In the educational conditions recognised as entitling to the one year's military service, and as preparatory for the civil service.

(2) In the too great spread of gymnasia throughout the country, as compared with that of the intermediate schools.

(3) In the relatively too high grants made to the gymnasia.

In proof of our first point we state shortly below* the

* [Besides supporting the author's contention in the text, the insertion of this rather lengthy note may serve the purpose of showing the close connection that exists in Prussia between all the higher schools and the various branches of the public service.]

A.—GYMNASIA.

I. The Certificate of Maturity qualifies—

1. For entering the university, and the examinations required for entering the church and the higher posts in the civil service ;
2. For entering the course of study for architecture and machine-con struction, and the State examinations connected therewith ;
3. For entering the course of study at the Mining Academy and the examinations for the higher posts in the service of the mines, iron furnaces, and the salt-works ;
4. For entering the Royal Academy of Forestry and the examinations for the higher offices in the Royal Forestry service ;
5. For admission to the examinations for the higher postal service ;
6. For admission to the Royal Friedrich-Wilhelms Institute and the

conditions which entitle to the one year's military service, and the privileges which attach to the certificate of attend-

Royal Military Academy for Medicine and Surgery at Berlin (for this there is required a further previous examination by a special Central Commission in Berlin).

The Certificate of Maturity exempts—

7. From the examination for ensign ;
8. From the entrance examination as naval-cadet, if in mathematics the class "good" is attained.

II. The certificate of satisfactory attendance and work for one year at the highest class (prima) qualifies—

1. For posts in the Indirect Taxes' service (for the service of the Direct Taxes the same qualifications are required as in the higher posts of the civil service) ;
2. For the higher posts in the telegraph service. Acquaintance with the ancient languages is not required for this service, but complete facility in the use of French and English is indispensable.

III. The certificate of fitness to enter the highest class qualifies—

1. For entering the inferior Judicial service ;
2. For license as a dentist ;
3. For admission to the higher Agricultural Colleges ;
4. For civil-supernumerary in the administration of the provinces ;
5. For the post of clerk in the service of the mines, iron furnaces, and salt-works ;
6. For the examination as a land surveyor ;
7. For the examination for posts in the higher postal service (but only exceptionally) ;
8. For admission as civil aspirant for the military and naval service ;
9. For admission to the Royal Veterinary College at Berlin ;
10. For the examination for ensign ;
11. For civil-supernumerary in the national railway service ;

IV. The certificate of fitness to enter the upper second class (ober-secunda) qualifies—

1. For appointments in connection with the Imperial Bank ;
2. For the examination as an apothecary ;
3. For admission to the Royal Academy of the Fine Arts ;
4. For admission as a naval cadet (there is here also a special entrance examination, from which, however, Latin, German, and history are excluded). This certificate suffices also—
5. As proof of an education entitling to the one year's military service.

ance at, and of having done the work expected from, the individual classes in Prussian schools.

V. The certificate of fitness to enter the lower second class (unter-secunda) qualifies—

1. For the examination as a teacher of drawing;
2. For attendance at the Royal College of Gardening, Berlin;
3. For attendance at the Royal Veterinary College, Berlin;
4. For attendance at the Trade School;
5. For the office of postal-assistant;
6. For admission to the Royal College of Music and to the Royal High School of Music, Berlin;
7. For admission to the Cadets' College at Lichterfelde, Berlin.

VI. The certificate of fitness to enter the third class (tertia) qualifies—

For admission to an agricultural school.

B.—Real-Gymnasia (formerly First Grade Real-Schools).

These institutions have the same privileges as the Gymnasia in the corresponding classes, with the exception of I. 1 and I. 6. The certificate of maturity, however, qualifies for entrance to the university and the State examinations for the higher-school service in the branches of mathematics, science, and modern languages.

C.—Higher Real-Schools (formerly Second Grade).

These have the privileges of the Gymnasia given above in I. 2, II. 1, III. 4, and IV. 5, and also for all the inferior branches of the public service.

D.—Progymnasia and Real-Progymnasia

have, so far as they go, the same *Lehrplan* and the same privileges as the Gymnasia and the Real-Gymnasia.

E.—Real-Schools.

(These for the most part are without Latin; they have six classes, the highest of which has a two years' course; the course, therefore, is seven years long). The certificate of having finished the complete course satisfactorily entitles to the privileges given above in III. 4, 5, 6, 7, 11, and IV. 2, if Latin is an obligatory subject of instruction. The certificate of fitness to enter the highest class gives the privileges of V. 3, 4. The certificate of satisfactory attendance and work for one year in the highest class entitles to the one year's military service.

F.—Higher Burgh Schools.

The best of these have already been mentioned under D. Under this name are included a number of institutions, partly with and partly without Latin. The most important privilege they possess is that of holding examinations for the certificate that entitles to the one year's military service.

From this it appears, and this is the only point we remark on, that attendance at the second highest class at a gymnasium or Real-gymnasium gives the same privileges as the certificate from the highest class in a Real-school, and the certificate of maturity from a burgh-school. In the same way the certificate of the highest class gives the pupils of the gymnasium and the Real-gymnasium extensive privileges, which the boy at the burgh-school can only attain to by a certificate of maturity, or not at all.

Besides, many professions can be entered only by the certificate of maturity from the higher schools; and it is quite natural for parents to send their children by preference to these schools, in order to keep open to them all possible avenues to future careers, and to close no avenue against them. It is these claims of the different branches of the public service upon their members that have given our whole higher education a permanent set in a wrong direction.

In the year 1874 the Education Department addressed questions to the different departmental ministers as to how far they would be disposed to modify their demands, and especially as to how far they thought they could go in dispensing with a knowledge of Latin. The answers were not favourable at all. Without a knowledge of this subject admission was positively refused into the Academy of Architecture, "where the candidate had the intention later on of passing the State examination in architecture"; and entrance was similarly refused into the Royal Academy of Forestry. A knowledge of Latin is still imperative as a part of the training for the State service in mining, for the post of ensign, marine officer, or military-intendant, and for the higher postal service; it is likewise necessary for students of pharmacy and for veterinary surgeons.

This predilection for Latin on the part of the authorities forms the main check to a sound school reform. So long as this preference lasts, the Real-schools cannot omit Latin from their course without losing the great mass of their scholars, who would make a rush to the lower classes of the gymnasia. The place to be assigned to Latin is the *punctum saliens* of the whole school question, which is further involved by the relations in which the schools stand to the universities. There is certainly room for complaint about the action of our military authorities on this subject. They regard the passing through two-thirds of the course at a gymnasium or a Real-gymnasium as a more complete education than is got in the same length of time at a well-organized burgh-school. Our question cannot advance a step till this prejudice is abandoned.

Similarly, the demand for two modern languages from every one year's service man, as was formerly insisted on, is rather much. It forced upon the burgh-schools an extension of the *Lehrplan*, which made it too difficult to be got over in their course.

The artificial inducements to leaving school before the completion of the course, by attaching large privileges to classes below the highest at the gymnasia and Real-gymnasia will clearly be best avoided by making a certificate of maturity the condition of obtaining these privileges, this certificate to be graded according to the rank of the different schools. This, however, can only be effected when intermediate schools are spread generally over the country.

This brings us to our second point. It is a settled point of policy with the Prussian Government to plant gymnasia everywhere over the country. Its action, however, in this respect, it is fair to say, is by no means arbitrary; it is the result of pressure from the classes who give the tone to

society. Only in the last session of the Landtag the Government was called upon to justify its refusal to convert a pro-gymnasium into a gymnasium. The defence was that in the present over-production of abiturients and of men with a university education the Government held it to be its duty to extend the number of gymnasia only when the need of such extension was proved. Several of the deputies admitted the force of this and supported the action of the Government. The opinion is becoming more general that too great an extension in the direction indicated has already taken place.

In social and political life the lead is generally taken by the educated class. The leading people even of a small town, the magistrates, the physicians, the apothecaries, the teachers, the officials connected with the law courts or the Government, have themselves been at the university and wish their sons to have the same education. When a higher school is instituted they naturally use all their influence to have it made a gymnasium. This secures for their children a complete school education without the necessity of going from home, which, on pecuniary as well as educational grounds, cannot fail to be an object with the parents. Hence the number of petitions from small places for the establishment of a gymnasium, although only a small minority of the people really want one, and the Government hitherto has been very ready to listen to such petitions. The consequence is that the merchants, artisans, land-holders, and peasants of the neighbourhood who intend their sons for their own occupations, but who wish to give them an education above the common, are forced to send them to a gymnasium, instead of to a higher burgh-school or to a Real-school, where they could complete the course and get an education adapted to their circumstances. The further consequence is that a majority of these scholars, and consequently a very large

percentage of the boys at the gymnasia, stop short at the middle of the course. Others, however, from motives of ambition complete the course, and, contrary to their original intention, go to the university. In the university life they have the reward for the toils they have undergone, and what they have learned has a distinct professional value.

To prove what we have said by statistics, we have not only to compare the number of the schools with the area and the population, but we have to attend particularly to the distribution of the schools and to determine where the population is directed to these particular schools. We must know in how many places there is nothing but a gymnasium. If we wish to go more deeply into the subject we must determine how many scholars at such places as compared with others leave the gymnasium before the completion of the course. We should further know the social position of the pupils in the different classes, and also of the abiturients. The Government could easily supply information on these points, but at present most of it cannot be had, and we can therefore only make our inquiry half complete.

The number of the schools is known. In Wiese, vol. III., there is a map from which we can see for the year 1873 in how many and in what towns there are only gymnasia. From this we have compiled the following table (p. 260).

From this table we see that more than one-half of all the gymnasia in Prussia are isolated, that is, the population of the surrounding districts are obliged to send to a gymnasium all the children who are to get an education going beyond that of the common schools.

This result is still further emphasized by the existence of 29 isolated pro-gymnasia. The difference is remarkable between the Old Provinces and the New. In the latter there were 32 per cent. isolated, in the former 60 per cent., and in

DISTRIBUTION OF THE HIGHER SCHOOLS IN 1873.

	Number of Gymnasia excl. Pro-gym.	Isolated Gymnasia.	Real-gymnasia.	Isolated Real-gymnasia.	Higher Burgh-Schools.	Isolated Higher Burgh-Schools.	Gymnasia and Real-Schools in one place.	Gymnasia and Burgh-Schools in one place.	Gymnasia, Burgh, and Real Schools in one place.
In all Prussia,* . .	220	122	92	26	88	53	44	22	11
In the Old Provinces, . . .	180	109	72	20	53	34	36	11	6
In the New Provinces, . . .	40	13	20	6	35	19	8	11	5
In the 4 agricultural provinces—Prussia, Pomerania, Posen, Silesia,†	83	56	27	7	15	11	14	4	2

the four agricultural provinces as many as 67 per cent. The effect of this disproportion is still further heightened by the general deficiency of other schools, especially where they alone give the tone. No doubt, taking Prussia as a whole, the Real and burgh-schools form 44 per cent. of all the higher schools taken together, but it is mainly in the large towns that they are found as complementary to the gymnasia. The supposition clearly is that in the agricultural districts there is no need for the schools in question, the day-labourers and peasants having no desire for anything beyond elementary instruction, while the teaching of the gymnasium is what is wanted for the sons of the official and land-holding classes. In the four agricultural provinces there are 83 gymnasia, while there are only 27 Real-schools and 15 higher burgh-schools,

*[In Berlin there are 10 gymnasia and 8 Real-schools. Of these, 3 gymnasia and 1 Real-school are supported by the State, as is also 1 girls' high school; the rest are supported by the City of Berlin. See note p. 264.]

†[Twelve millions, or nearly half the population of the kingdom of Prussia, are engaged in occupations more or less connected with agriculture. There are nearly five millions of possessors of landed property. Large estates are mainly found in the eastern and less populous districts. A survey taken in the year 1858 showed 1,099,000 owners of land, each holding under 3¼ acres.]

that is to say, two-thirds of all the higher schools are gymnasia, and while 56 of these are the sole representatives of higher education in their districts, only 7 Real-schools and 11 burgh-schools occupy such a position. There is here, as appears to us, a sad want of proportion. In the New Provinces the proportions are reversed: there are there 13 isolated gymnasia, but for this we find 6 Real-schools and 19 burgh-schools without any competition, and taking the whole of the New Provinces together there are only 40 gymnasia while there are 55 Real and burgh schools. In the New Provinces, in other words, there is no artificial forcing of an excessive proportion of the population to give their children who are intended for business a learned education, or, to put it more correctly, from want of proper time to complete the course, only a half education. In the New Provinces it is the interests rather of the great middle class that are consulted, whereas in the Old Provinces account has been taken, as hitherto has so generally been the case, only of the higher stratum of society and those districts have been made in a disproportionate measure to swell the lists at the universities.

One thing more seems to us to be a clear result of these figures. The development of our town population does not, as is so generally maintained, tend to widen the gulf between the higher class and the great body of the people. It seeks, on the contrary, as is proved by the growing importance of the intermediate schools in large towns, to bridge over the gulf by the formation of a middle class.

A map, prepared by Dr. Henke in 1876, shows the distribution of the higher schools for all Germany in much the same way as Wiese's map does for Prussia. He, unfortunately, takes no account of the second-grade Real-schools or of the pro-Real-schools. From him we obtain the following figures:—

State.	Gymnasia.	1 Gymnasium.		Pro-gymnasia.	Real-gymnasia.	Higher Burgh Schools.	Total of Higher Schools.	High Schools of all kinds.	
		Per Inhabitants.	Per Germ.* sq. miles.					Per Inhabitants.	Per Germ. sq. miles.
Prussia, . . .	232	106,435	27,27	32	80	105	449	54,995	14,09
Bavaria, . . .	31	156,885	44,44	40	6	—	77	63,161	17,89
Saxony, . . .	13	196,634	20,94	—	12	11	36	71,006	7,56
Würtemberg, .	8	227,317	44,28	5	4	6	23	79,006	15,40
Baden, . . .	7	208,775	39,11	6	5	4	22	66,428	12,44
Hesse, . . .	6	143,303	23,23	1	5	5	17	50,579	8,20
Small N. Ger. St.,	25	79,854	21,77	1	6	15	47	41,591	11,34
Small Mid. do.,	17	74,758	15,69	3	7	8	35	36,311	7,62
Els.-Lothringen,	11	140,871	23,92	1	2	12	26	59,599	10,12
	350	117,316	28,05	89	127	166	732	56,017	1,339
	Percentage of the Separate Categories of High Schools.								
Prussia, . . .	51·6			7·1	18	23·3	100		
Bavaria, . . .	40·2			5·2	7·8	—	100		
Saxony, . . .	36·1			—	3·3	30·9	100		
Würtemberg, .	34·8			21·6	17·3	26·3	100		
Baden, . . .	31·8			27·3	22·7	18·2	100		
Hesse, . . .	35·3			5·9	29·4	29·4	100		
Small N. Ger. St.,	53·3			2·1	13	30·8	100		
Small Mid. do.,	48·6			8·3	20·3	22·8	100		
Els.-Lothringen,	43·3			3·9	7·8	45	100		
	47·8			12·2	17·3	22·7	100		

* [The German square mile is close on 22 English square miles.]

The comparison with area above is just as little satisfactory as that with population, for, according to the density of the population, the same proportion will have a different meaning. When, for example, it is said that in Saxony there is one gymnasium for every twenty square miles, and in Prussia only for every twenty-seven square miles, it is not meant that gymnasial training is more favoured in the former State than in the latter; because, on the basis of population, Prussia has one gymnasium for nearly half the number of inhabitants as compared with Saxony. The principal value of the table we consider to be this: It enables us to see whether the population have a choice of higher schools, or whether a learned school is their only alternative to resting content with the common school. In this respect Bavaria is least favourably situated, and this, doubtless, is the cause of the exceptionally large crowding to the universities that has been long experienced in that State. In Bavaria one-half of the Gymnasia (15) were isolated. In these districts in 1875 there were no higher burgh schools at all, and only six Real-schools. The learned schools formed 92 per cent. of all the higher schools, whereas the corresponding percentage in Prussia was only 58·7. By far the most equable distribution is found in the kingdom of Saxony, where there is not a single gymnasium without a Real-school or a higher burgh-school to compete with it. No doubt this is more easy of accomplishment in that State, where there is a thick population; but it might surely have been avoided, where there were more higher schools than one, to have nothing but gymnasia, as was the case at Stuttgart and Pforzheim, in Würtemberg, and at Liegnitz, in Prussia. It is only in Saxony that the higher burgh-schools, the Real-schools, and the gymnasia are about equally represented. The advantage possessed by this State seems to lie in the

fact that it has no pro-gymnasia, the place of these being taken by higher burgh-schools and Real-schools, while in Bavaria the pro-gymnasia form 52 per cent.; in Würtemberg, 21·6 per cent.; and in Baden, 27·2 per cent. of the higher schools. The prominent place taken by this class of schools prevents the growth of the other schools.

Elsass-Lothringen is distinguishing itself by its large number of higher burgh-schools. The Real-gymnasia were but poorly represented, and they have recently taken a new character, by their change into schools in which Latin is not taught. It is to be hoped that this course will not be without effect upon the rest of Germany.

The objection may here be urged that we have based our observations on numbers which relate to the years 1873 and 1875. But the fact is that the numbers for the most recent years could not be obtained;* and those we formerly gave, so far as they were accessible to us, prove that in the intervening period no essential alteration has taken place. We have investigated the facts relating to our schools for each of the provinces of Prussia separately for the three

* [From a recently-issued table, obligingly forwarded by the author, giving the figures for 1883, the distribution of the various classes of higher schools does not appear to have been materially altered since the date of the table given on p. 260. In the ten years the number of gymnasia in Prussia has increased from 220 to 253 (old provinces 207, new provinces 46). In the number of the Real-gymnasia there is no increase. The classification of the Real-schools below the rank of gymnasia has undergone an alteration which renders difficult an exact comparison between the two periods. As compared with the note on p. 260 regarding Berlin, the higher education of the German capital was, in 1883, provided for by 15 gymnasia, 1 pro-gymnasium, 8 Real-gymnasia, and 2 upper Real-schools. In the ten years the population had increased by a little over 300,000. In this connection, it is striking to compare Paris with Berlin. In an article in the *Revue des Deux Mondes* for Dec. 15, 1878, M. Michel Bréal, a member of the Institute, states that "notwithstanding the increase of population, the number of lycées in Paris has remained stationary since 1820. In that year there were 5, and there are 5 still."]

dates 1860-1, 1870-1, and 1880-1, as regards the number of the gymnasia, abiturients, and students, with the object of seeing what connection can be established between them. It would have left a gap in our inquiry to omit this altogether, although the result for the individual provinces is not of very great consequence, as too many factors have to be taken into account. We have to consider not only the proportion of schools to population, but also, as already mentioned, the proportion to area, and the relation of the schools to each other; then the circumstances of the parents have to be taken into account, which tell differently in the country and in the town, and differently, again, as between places where there are large estates or a preponderance of peasantry, although these may not come far behind the land-holder in wealth.

From the details for the various provinces, we see it to be a mistake to suppose that it is especially the large towns which have contributed to the over-production of abiturients and of university students. It is the agricultural provinces which have done most to bring about this result. In Brandenburg the increase of the abiturients in the three periods is represented by the figures 100, 124, 133; and in the provinces of Prussia, Pomerania, and Posen by 100, 150, 180. But we have no information to show how far the majority of the abiturients come from the large towns or of what religious creed they are. Were this latter given it would easily be shown that the percentage of Jews is too small, even with the large numbers of them that go to the university, to have had, as has been maintained, any appreciable influence upon the attendance.

Here, however, the statistical method fails to set everything in its proper light, and reliance upon it alone is apt to land us in false conclusions. But the numbers undoubtedly

show that the spread of the gymnasia in most of the provinces of Prussia,* and, indeed, throughout Germany in general, is far greater than our requirements, and that in this way a direct road is laid to the overcrowding at the universities. The numbers show, further, that there is a crying want of higher burgh-schools and Real-schools of a class that give a suitable preparation for business careers. From these statements may be deduced the task that lies before us.

In the Rescript of 1870 the Minister Von Mühler admitted that a commune is only entitled to have a public higher school when all the requirements of elementary education are satisfied. By a parity of reasoning, we might in our opinion go farther, and maintain that the establishment of a gymnasium could only be justified where there exists one of the intermediate schools, at the very least a higher burgh-school. The sending of the small number of children to places where there is a gymnasium is a matter of easier accomplishment than the sending of our ordinary burghers' sons to distant places where they may obtain at non-Latin schools the only training that is suitable for them. The gymnasia, relieved of their excessive numbers by the spread of intermediate schools, will assuredly be able to do better work than hitherto. We shall at least have a lessening of home work when each teacher has a smaller number to teach. The erection of pro-gymnasia, however, for Real-schools is, we must emphatically state, no solution of the question. The only effect of these is to lead the people to rest satisfied with a half school education.

* It should be remembered that at least once before in Prussia a change such as that we are here advocating took place. Between 1816 and 1846 the number of learned schools went down from 155 to 146, although the population in that time had gone up about 56 per cent. and school attendance 73 per cent.

We find, further, a one-sided, excessive, and artificial promotion of the higher education, especially of that of the learned schools, in the too great contributions made to these institutions alike from central and local sources. A disproportionate attendance at these is thus facilitated, especially as these grants are attended with no satisfactory rise in the school fees.

On this point two opposing tendencies are observable. The one—the democratic—regards it as all-important to spread school education as widely as possible, to raise it as high as possible, and, as a consequence of this, to make even the higher schools as accessible to all as possible. Contributions are made by the collective body of the people with the view of keeping the school fees moderate. Hitherto this has been the prevailing idea, and it is completely justified so long as the main object is to stimulate the desire for education, and so long as we can calculate on the demand for it only being too low and not too high.

The other, the more aristocratic tendency, is different. It regards it as unquestionably the duty of the State and of the local authorities to put elementary education within the reach of all; but this duty is a limited one when we come to education above the elementary stage. This higher education cannot be turned to advantage by all, and, indeed, it becomes a positive disadvantage when it is out of proportion to the circumstances of the recipient. Culture, too, it is further maintained, is advanced more when a small number, even with great sacrifices on their part, are secured the best training for the end in view, than when it is shared by an excessive number, who necessarily lower the level of collective achievement, because the means are not sufficient to put the highest training in such a way within the reach of all.

Between these two conceptions there is no difference in principle. Even the second regards the spread of ideal benefits as equivalent with the advance of culture, and attempts it. But to secure success here, moderation before all things must be observed. We came to the result that in different directions a disproportion is already perceptible between the number of persons provided with higher education and the posts to put them in.

We saw that from 80-86 per cent. of the abiturients go to the university, and that from this cause there has been produced an overcrowding in all the departments of university study, while an excessive proportion of the scholars at the gymnasia do not reach their goal at all. The imperative requirement, therefore, seems to be to lead the stream away from the gymnasia. The best way to do this is to increase the fees, and so more and more to cover the cost of the gymnasia.

It will of course be objected that if this were done it would be almost impossible for the poorer classes to raise themselves to a higher position, and that the gymnasia would be even more exclusively reserved than at present for the wealthy classes, which would be a hardship and an injustice. The injustice we dispute. As things are at present the blessing must be said to be very small, when mediocre abilities, by all sorts of sacrifice and pinching, force their way into a social sphere, where in many cases they never get thoroughly acclimatized. For themselves, the gain is a small one, and for society a smaller one still.

In these days a large number of youths miss their destiny. With no special aptitude for a university course, but with abilities that would have made them excellent tradesmen, they go through a laborious preparatory course, with a view to the office of preacher, higher school teacher, or advocate.

The necessity of working for their daily bread, meanwhile, has deprived them of the opportunity of taking on any broader, and especially any social culture; and it is little wonder if the outside observer comes to the conclusion that it would have been better had they indulged their aptitude for a practical career. A complete education on all sides the gymnasium cannot give. What is there given has to be completed by that of the home, of the family, or else of life. In too many cases this part of the education is sadly defective, and hence the large number of abiturients—excellent Latin scholars, perhaps—of good students, even of higher school teachers and officials, who have had no harmonious training, not only as regards externals, but as regards their conception of life and their moral feeling. No educated man will doubt that a good tradesman stands higher than an indifferent pastor or teacher. On the other hand, it would be a hardship if, by raising the fees, the way were closed against the able poor. Along with this, therefore, we very strongly recommend the introduction of a larger number of free places for poorer scholars who have evinced real ability at the common school. If these get a complete and all-round training in good institutions for a learned career, the difficulty under consideration will be met and our serious overcrowding will be avoided.

CHAPTER XVI.

THE EXPENDITURE ON EDUCATION IN PRUSSIA.

THE cost of education, so far as our present inquiry is concerned, was—

		Per cent.
For the Public Elementary Schools (1882), .	£5,050,831	
From fees, ...	648,776	= 12·8
For all the Higher Schools for Boys (1883-84)	1,275,849	
From fees, ...	604,530	= 47
For the Gymnasia (incl. Pro-gymnasia), .	801,125	
From fees, ...	378,298	= 41
For the Universities (1882-83) . . .	391,089 *	
From fees,† &c.,.	36,430	= 9·3

From endowments—

The Elementary Schools drew about . . .	£500,000
The Higher Schools, ...	87,283
The Gymnasia, ...	47,754

From grants, rates, and patrons' additions there was contributed—

For the Elementary Schools, ...	£3,900,000
For the Higher Schools, ...	584,035
For the Gymnasia (incl. Pro-gymnasia) . .	378,298
For the Universities, ...	292,228

* This is exclusive of the £2700 formerly mentioned as paid by the Government for the encouragement of the docents.

† [As explained on p. 276.]

	Total.	From Fees.	From Grants and Rates.
Cost per child in the Elementary Schools,	23s.4d.	3s.	18s.
Cost per boy in the Higher Schools,	166s.	79s.	78s.
Cost per boy in the Gymn.(incl. P.-Gymn.),	174s.	81s.	80s.
Cost per student at the University,	641s.	—	464s.

From this it appears that the expenditure from grants and rates for the higher schools is very considerable, every scholar drawing from these sources about £4, or nearly the half of the entire cost. No doubt the cost to the public for the elementary schools—for our purpose it is indifferent whether this is from grants or rates—amounts to seven times more than for the higher schools; but it must be kept in view that these latter sums are expended on behalf of the better classes of the population, and the question arises whether this can be completely justified.

It may be justified so long as without such contributions the general education of the people is from poverty not sufficiently high. Its justification will cease when this is no longer the case, but when the attendance at the schools is normal; and it will be quite unjustifiable when the schools are crowded, which is undoubtedly at present the case with the gymnasia.

The fees in the gymnasia at present may be set down, on an average, at £4 to £5. We find them also at £3 12s. and £6: here and there even a little higher (at Düsseldorf 6 guineas, Altona £6, for pupils living beyond the burgh, £9.*) Still these are only exceptions.

It may be taken as a very common proportion that the cost to the parents is, in the elementary schools, 18s.; in the

* In 1824 the fees at the gymnasia showed great differences: by 1864 they had become tolerably equalized: in 1874 the fee in all the classes in the Berlin gymnasia was about £5. In Halle that is the fee at the present time. In the girls' high schools the fees are from 72s. to 96s.

burgh-schools, 30s; and in the higher schools, 90s. At first sight the difference, indeed, appears considerable; but when looked at more closely a five-fold increase cannot be regarded as sufficient. Eighteen shillings for one child, or thirty-six shillings for two, is a very heavy burden for a working-man. It would be deemed quite exceptional in a middling-sized town to levy so much from him by direct taxation. It is 5 per cent. of an income of £40 a year. It would be an excessive burden laid upon the workman, as it amounts to about 15 per cent. of the free income, that is, after deducting the minimum sum on which life can be supported. On the other hand, £5 is too little for a scholar at the gymnasium. Even in the case of three children it only comes to 5 per cent. on an income of £300, and the increase of the percentage of the free income is but small. We have required the efforts of six decades to bring about an equable distribution of taxation. Sixty years ago it was deemed impossible to levy from the rich and well-to-do classes taxes amounting to £10 to £100; and even yet we are not able, and it will require a very long time before we are able, to make the rich pay for the schooling of their children as they should. At first the highest rate which a taxpayer had to pay as income-tax was £7, later on it was £21, and later on still £1080. Even this limit has latterly been superseded as too narrow. Meanwhile the exemptions of the lower classes have always been increasing, although there is considerable room for further exemptions before an equitable adjustment is reached. An increase of the fees at the gymnasia of 50 per cent., to be raised later to 100 per cent. on the present rate, and that without any distinction of the classes, would essentially relieve the rates and help the schools, and would be no more than circumstances require. In this way it would be possible to lower

the burden of taxation, or to offer a larger number of free places for capable but poor children, a point on which we lay very great weight.

A greater importance attaches to the above figures when they are compared for various years. The total cost per scholar was—

	At all the Higher Schools.	At the Gymn., including Pro-gymnasia.
1863, . .	£5 5 0	£5 17 0
1868, . .	6 1 0	6 17 0
1882, . .	8 7 0	8 11 0

The contributions from the common funds have increased in a far higher proportion still :—

1863, .	27s. 10d. (say) = 100	29s. (say) = 100
1868, .	36s. 5d. „ = 131	39s. „ = 134
1882, .	76s. 5d. „ = 274	80s. „ = 276

From grants alone there was paid—

	For all Higher Schools.	Per Scholar.	For Gymnasia.	Per Scholar.
1864, .	£79,008 =	21s. 4d.	£75,287 =	30s. 6d.
1868, .	117,851 =	22s. 6d.	110,958 =	33s. 8d.
1874, .	225 977 =	35s. 4d.	203,256 =	58s. 10d.
1882, .	217,646 =	28s. 6d.	194,203 =	41s. 5d.

The increase is very remarkable up to 1874. Indeed, between 1872 and 1874 the State had done a great deal for the higher schools. The lessening of the grant, and, as indicated by this, a change in the views of the Government, are at the last period worthy of special note.

The figures further show, when compared with the grants made to the Real-schools, what favours were and are shown to the gymnasia by the Treasury. In 1864 the Real-schools (first grade) received from the Treasury £2,117, and Real-schools (second grade) £384, and the higher burgh-schools £94. In 1874 the grant to the Real-schools

was £22,371 ; and in 1882, £23,443, or about 13s. per scholar.

These figures require no comment. The Government clearly goes on the supposition that it is its first duty to promote the institutions which are intended for the training of the State officials, with the view of keeping up the requisite supply, and of having these officials as well educated as possible. This procedure is justified so long as there exists any fear, without such special aid, of the failure of the supply of candidates for the Civil Service. There is no longer foundation for any such fear, and the justification for the procedure of the Government is correspondingly diminished. On the other hand, too, the other circles of the population have a claim for similar support when there is a deficiency of the schools which they need. It appears reasonable, therefore, that the sums which are brought in by the increased fees at the gymnasia, and which would no longer be required from the State, should be expended partly in supplying free places at the gymnasia, and partly in supporting higher burgh-schools and Real-schools instead of pro-gymnasia. This is the simplest way of checking the over-production of university bred men, and of supplying the higher working class, in the wider sense of that term, with a more finished education, and one more suitable to their requirements than has hitherto been the case.

For our present purpose it is of special interest to take a glance at the income and expenditure of our universities ; but unfortunately we have not full statistics for a complete and satisfactory discussion of the subject. The cost of the universities to the State has been as follows :—

Year.*	Total.	Per Student.
1805	£15,249	£9 15 0
1820	59,402	—
1834	67,676	13 8 0
1849	73,659	16 15 0
1850-60	73,833	15 9 0
1861-66	86,923	15 4 0
1867-71	131,200	18 4 0
1871-76	216,336	28 2 0
1876-81	276,307	28 14 0
1882-83	295,661	24 3 0
1883-84	292,228	23 4 0

Of more recent date the extraordinary expenditure forms a large proportion of the whole. Recently a large number of magnificent buildings have been erected, to accomplish in shorter time and in a more excellent way what had formerly from necessity or excessive economy been neglected. This extraordinary expenditure, however, can only be represented by averages, as there are naturally great fluctuations in the amount from year to year. The entire cost on the universities (inclusive of the extraordinary) was from

Year.	Total.	Per Student.
1871-76	£342,921	£44 11 0
1876-81	418,812	43 10 0
1882-83	379,651	31 0 0

In the first of these periods the extraordinary expenditure formed 37 per cent. of the whole; in the second period 34

*In 1697 Prussia had 4 universities—Duisburg, Halle, Königsberg, and Frankfort—which were endowed to the extent of £3930. In 1797 the endowment for the 5 universities—Erlangen being now one of them—was £9053.

per cent.; last year only 22 per cent.; while in 1869 it was not 2 per cent. Of course this extraordinary outlay is not immediately in connection with the students. It cannot, however, be completely neglected, as without it the cost appears too low, and the increase in the cost is not correctly represented.

In the year 1882-3 the total cost of the universities was £391,089, of which only £36,430 was their own earnings, brought in from students' fees, institutions connected with the universities, such as those for the treatment of sick people, &c. This amounted to 9·3 per cent. of their entire cost, whereas the contribution of the State—apart from the extraordinary contributions—came to 72 per cent.

The remark naturally occurs, that when the outlay for the universities on the part of the State is so considerable, and the contributions of the students themselves so small, especially in times of overcrowding, the claims of those most nearly interested should come in and a saving of the State funds be effected.

On the other hand it is to be observed that while a certain increase of the matriculation fee might be right enough, it would be difficult to make this increase such as would seriously affect the pecuniary result. The main burden for the parents lies in the maintenance of the students, and in a very large number of cases this is already heavy enough. It is better surely to stop the stream at its source that at its outflow. It is hard only to present a barrier when their sons are ready for the university, and when all the sacrifices have been made. In the same way it is wrong, in our opinion, to make the first examination easy and the second one hard. It is easier at the first stage to enter upon a new course than, say, four years later, at the second.

It gives a false impression, however, to charge the State

expenditure for the universities upon the students alone. The establishments and the collections take up 44 per cent. of the entire cost; and these would have been necessary in the interest of science as well as for the direct benefit of the people (such as hospitals), although the students derived no benefit from them at all. Various professorships, too, have been established to represent and promote their particular subjects in the country, although not more than two or three students may be expected to attend the lectures. We said above that the universities are to be regarded not merely as teaching institutions, but also as nurseries of science and learning. A different standard is to be applied to the expenditure upon them than to that laid out upon the schools.

The close connection we have shown to subsist between the higher schools and the attendance at the universities will we hope be regarded as a sufficient justification of our long digression from the immediate object of our discussion.

CONCLUSION.

THE fact we specially aimed at establishing, and which is generally known and recognised, was the enormous increase in the attendance at the universities of recent years; we have investigated the subject in detail and traced its causes. We saw at the outset that a similar high-water mark of attendance had been reached once before, namely, at the beginning of the *thirties*, in the present century. Some years thereafter the reaction came of its own accord, and it may be assumed that the present crowded attendance will only be temporary. The phenomenon, however, presents itself with a breadth and a rapidity well calculated to attract the special attention of the economist.

Before entering more minutely into the position of the separate faculties, we tried to find out the social classes to which the students belonged, but, unfortunately, on a very limited basis. We reached, however, the certain result that our official classes, in the widest sense of that term, are recruited to a far greater extent than formerly from circles without academic culture, and, indeed, in a very large degree from the poorer classes. Dieterici, no doubt, is right when he says, "The State needs people who have been accustomed from their youth to limited means, and who will at a future day be content with a modest lot"; but this has also its reverse side, to which we drew attention.

Of the separate faculties we found by far the most con-

siderable increase in the philosophical faculty; and in this faculty we saw that it was the principal and not the subsidiary branches of study that produced this result. The increase, in fact, was caused mainly by the large numbers studying science and the modern languages. Our attempt to compare demand and supply here was not very successful. Hitherto we saw there has been no lack of posts in the department of classics; but in the departments of mathematics, modern languages, and science there is a distinct over-supply of teachers. In law our statistics yielded an altogether extraordinary over-supply. In medicine sufficient employment has as yet been found for the growing numbers, although this is specially owing to the dying-out of the first and second class surgeons. In Protestant theology, too, there were up to the present time large gaps to be filled up. In both of these, however, medicine namely, and Protestant theology, the increase of students has of recent years been so considerable that the supply is far beyond the demand, if the large numbers continue for a short time longer. But the number of abiturients, as we saw, has gone on steadily increasing up to the very last year of the period under our consideration, and a larger supply still is doubtless to be looked for. Catholic theology in these times occupies quite an exceptional position. It is the only branch of study which at the present moment still lacks its necessary support. It suffers from a felt want of students, which must continue at any rate for a series of years longer.

The question now occurs, What opinion is to be formed on the economical importance of these phenomena? wherein are their causes to be sought for? and what measures are eventually to be taken to counteract their effects?

We found ourselves obliged to oppose the widespread idea that an increase in the number of those who go to the uni-

versity is in all circumstances to be regarded as a gratifying indication of the spread of the desire for culture. This is how Dieterici, the statistician, puts it:—"Happy the State which possesses in all lines of life, in town and country, a large number of men who have been at the university and had a systematic training! . . . Is it not a grand thing that, in Prussia as a whole (at the beginning of the *thirties*), taking town and country together, of every 100 heads of families, one has had a university education? . . . The golden tree of culture bears precious fruit in all ranks."

Our numbers showed that the universities are to be regarded as institutions for the teaching of professions, and that the gymnasia in their turn are to be looked upon as the special preparatory schools for the universities. An overwhelming proportion of the gymnasial-abiturients go to the university, and a still larger proportion of the students take a university course merely as a means of earning a living. It is only a few who go to the university with a view to general culture alone.

The decision of the question, therefore, whether the attendance at the universities is too large or too small must rest simply on the relations of supply and demand. An over-supply, as we sought to show, is just as bad as a short supply. The consequences of the former are these: The standard of the examination is raised excessively high, the result being that a very large proportion of the candidates are rejected, and forced to take to another line of life; or an appointment is long of coming, or the salary is kept low, or promotion is retarded—all which spreads discontent in the circles concerned, and leads to the emigration of our capable young men, who have cost the country considerable sums to train them. For this the country receives no compensation; the youths, indeed, are deprived of the chance of making it,

and they are forced to make an offer of their abilities to some other country.

But there are some other points in this connection that require to be considered.

The great mass of the population which, with some exceptions, gets no further education than that of the elementary school, forms an overwhelming proportion of the entire population, moderately calculated at 90 per cent. In the lower classes, also, marriage is more general, and takes place at an earlier age than among the educated classes; and by their greater fertility, in spite of the greater infant mortality prevalent among them, they increase faster. The increase of the percentage of the educated classes, which would otherwise have been equal, should for these reasons be a good deal smaller; but, as the percentage does not vary, this proves among other things an increasing and successful effort for culture on the part of the great mass. On the other hand, as population increases in density, a smaller number of representatives of the different professions suffices to supply the needs of the people; that is, in proportions otherwise equal occupation is found for fewer advocates, fewer officials connected with Government and with the administration of justice, fewer preachers, apothecaries, physicians, &c.; because, where population is dense, one person can more easily and satisfactorily attend to the same number of people than where population is scattered. We saw that in several of the professions in Prussia, in comparison with population, the number of posts had considerably diminished during the last decades—a circumstance which can be attributed to no other cause than that mentioned.

In the year 1815 there were 87 Protestant clergymen to every 100,000 inhabitants; in 1840 the number was 65; and in 1881, 48; the proportion of Catholic clergy in 1828

was 110; in 1840, 98; and in 1881, 83; of lawyers the proportion in 1831 was 44; in 1851, 35; and in 1881, 31. In the case of licensed physicians we have an increase in the number instead of a decrease. In 1834 the number for every 100,000 inhabitants was 17; in 1879 it was 30, while it was thought right that a less educated should be replaced by a more highly trained medical staff. In future, however, the increase cannot be expected to be equally great, although the increasing wealth of the public should render the calling-in of medical aid more general, and although in country districts there are still many vacancies to be supplied. Teachers, too, with a university education have increased considerably in comparison with population. In 1816 the number was 10 for every 100,000 of the population; in 1846 it was 13; in 1863, 14; and in 1881, 19. Here certainly a further increase in the number is desirable, and the prospect for students of philology seems righter than that in the other professions. On the whole, however, it must be maintained that the want of increase in the proportion between students and population is not by itself to be regarded as an unhealthy symptom; an increase, on the other hand, may well involve a serious disproportion.

The facts that have here been presented showed that in our time such a disproportion has arisen almost all over, and that rapidly too, and we tried to show its causes. We saw that these were three. The first we found in the circumstances connected with our schools. We established the fact that in Prussia, as indeed in most of the other States of Germany, too much favour was shown by the State to the learned schools, and too little support was given to the intermediate schools. By this policy wide circles are forced, or induced to educate their children, who were originally intended for business careers, as if they were preparing to enter one or

other of the learned professions; and it is no wonder if an excessive number of these continue on the road along which they have been directed.

It is further a fact—and indeed a very lamentable fact—that people engaged in commerce and industry are not generally allowed in Germany the social position which is their due, and which they generally take in other countries. Nothing but extraordinary achievements or an imposing fortune puts them on the same social level as the university trained official. The student's life is, doubtless, a pleasant one, and the consciousness of being able through this career to reach a more honourable position is the cause of many of our youth taking to a university life, when they have no special inclination for any particular line in business.

Commercial depression, finally, must be regarded as a cause of the present crowding to the universities. It is not to be viewed as of equal consequence with those just mentioned, as it can only be considered as temporary in its effects. That it does not tell with the same effect as the other two appears clear from the fact that the recent commercial improvement has had no effect in diminishing the numbers at the universities.

It is not difficult to see what plan ought to be adopted to counteract this calamity which already exists, and indeed is on the increase. The authorities have first and foremost to discontinue their partial and artificial fostering of the learned schools. It is not of "staff-officers," to use a figure that is indeed not quite a suitable one, either in the army, or in the public administration, or in commerce, that a want is to be looked for in Germany; it is rather "under-officers" we need, well trained, and of a higher moral level. These latter must in future have it put more easily within their reach to obtain an all-round education adapted to their after-career. Suit-

able schools must be provided all over the country, and the fees must be moderate enough to leave them open to the poorer classes. The higher schools must be reserved for a relatively small number, and undergo a reformation that will enable them to give the highest education consistent with the harmonious development of the whole nature, while avoiding to the utmost extent possible a waste of power. The gymnasia would then more exclusively than hitherto have to be treated as training schools for the universities and relieved of their foreign elements. The other schools should be deprived of this privilege of preparing for the universities, and so be put in a better position for concentrating their efforts on their proper functions. We have no fear that such a sharp distinction between our schools would give rise to any greater division than has hitherto existed between the professions for which an academical training is required and other occupations. As a real basis of equality of social position there is only one true education, and that can be obtained in different ways. We have the strongest possible objection to the idea that the training of the Real-school is a *lower* training than that of the gymnasium: it is only a *different* one. It is no doubt a lower one as preparatory for attending the university: it is not so for entering business. The present time, with its dense population, its large centres of intellectual life, and its improved means of communication, offers us a completely different life-training from what the beginning of the century offered to our grandfathers. Knowledge of the world, width of view, appreciation of other positions in life as well as knowledge of ourselves, may thus be more easily and better learned than by the study of books. The character, too, gains strengthening in this way, while the reason, the imagination, and the emotions may all thus find scope for their activity.

The activity of a commercial career, with its intercourse with the world, from which none can completely withdraw, supplies ample compensation for a university course. In his ingenious article* on "Halbbildung und Gymnasialreform," Hillebrand remarks on this point: "The aim of all education, the most moderate no less than the highest, is harmony, that is, due connection of the various faculties of the individual within himself and of the individual with humanity: to be educated means to be everywhere fit for one's position and sphere of action." He would have to admit, then, that men engaged in the walks of commerce or industry may acquire elsewhere than at the gymnasium and the university an education which puts him on a level with any professor, official, deputy, or physician. It is, further, quite certain that the abiturient from the Real-school comes nearer to a university student than the scholar from the lower second class at a gymnasium. We are anxious that the latter should be replaced by the former in commerce, industry, and rural life.

The reform in our school system which we have here advocated would of itself suffice to set matters in a satisfactory position. But, further, advantage should be taken of the present time to give legal effect to a reform that is desired by all who have intelligent acquaintance with the subject—the lengthening, namely, of the university course. The first step in the reform should be that the one year of military service be not reckoned as a part of the university course.

We have, in conclusion, to repeat what we said at the outset, that in the domain of education, statistics can only represent some sides of the question and cannot give explanations on all points that arise. By themselves they are not sufficient to yield a final judgment, and we are far from pre-

* Rundschau, 1879, p. 436.

suming to offer such in our attempts to draw from the statistics our own individual conclusions. These may stand in need of some modification, but we regard our task as completed if we have succeeded in collecting and manipulating the hitherto scattered statistics on the subject in such a way as to offer the leading statesman, the practical economist, and the historian, the means of forming a correct judgment on the questions under consideration and on our culture as a whole.

The following Table shows the Number of Degrees conferred annually at the Prussian Universities:—

ORDINARY DEGREES.

	PROTESTANT THEOLOGY.								CATHOLIC THEOLOGY.								LAW.				MEDICINE.				PHILOSOPHY.				TOTAL.			
	Doctors.				Licentiates.				Doctors.				Licentiates.				Doctors.				Doctors.				Doctors.							
	1861-66.	1866-71.	1871-76.	1876-80.	1861-66.	1866-71.	1871-76.	1876-80.	1861-66.	1866-71.	1871-76.	1876-80.	1861-66.	1866-71.	1871-76.	1876-80.	1861-66.	1866-71.	1871-76.	1876-80.	1861-66.	1866-71.	1871-76.	1876-80.	1861-66.	1866-71.	1871-76.	1876-80.	1861-66.	1866-71.	1871-76.	1876-80.
Berlin	...	...	...	...	0.8	1.8	0.6	0.5	...	...	...	...	...	..	...	...	12.2	13.4	4.0	4.5	138.4	106.6	91.2	74.2	30.2	16.2	13.6	22.0	181.6	138.0	109.4	101.2
Bonn	...	...	...	...	0.2	1.0	0.8	1.8	...	...	...	...	...	...	...	...	1.8	1.8	1.4	2.5	16.6	30.2	29.6	23.0	26.8	15.8	16.4	16.2	45.4	48.8	46.2	43.5
Breslau	...	...	0.2	...	0.2	...	...	0.2	0.2	...	...	...	...	...	...	...	3.2	3.6	2.2	2.3	18.8	24.4	23.0	15.0	16.4	18.0	24.6	21.8	38.8	46.0	50.0	39.3
Göttingen*	...	...	...	...	...	0.6	0.6	0.2	...	...	...	...	...	...	...	...	...	14.0	42.6	64.5	...	19.0	18.6	17.0	...	47.7	75.6	63.0	...	81.3	137.3	144.7
Greifswald	...	...	...	...	0.6	...	0.8	0.5	...	...	...	...	...	...	...	...	2.4	0.8	4.0	1.3	34.0	35.4	49.6	24.7	6.6	5.4	8 8	9.3	43.6	41.6	63.2	35.8
Halle	...	0.2	...	...	0.4	0.2	0.8	...	...	...	...	...	...	...	...	...	2.8	2.8	3.8	1.0	23.0	29.6	29.2	9.0	35.2	39.2	56.4	51.0	61.4	72.0	90.2	61.0
Kiel*	...	...	...	...	...	...	0.2	0.2	...	...	...	...	...	...	...	...	...	0.3	0.8	1.3	...	15.0	11.4	13.7	...	6.0	5.0	9.5	...	21.3	17.4	24.5
Königsberg	...	...	...	...	...	0.2	...	...	...	...	...	...	...	...	...	...	0.6	1.0	0.6	...	15.0	11.0	7.8	9.8	10.0	8.0	3.8	8.0	25.6	20.4	12.2	18.0
Marburg*	...	...	0.2	...	...	1.0	0.8	0.5	...	...	...	...	...	...	...	...	...	0.8	1.0	0.8	..	15.2	17.4	11.5	...	7.4	9.2	14.0	...	24.4	28.4	26.8
Münster	...	...	...	...	...	...	...	...	...	0.2	...	...	3.2	3.8	2.4	...	...	...	...	...	...	...	...	...	6.4	11.0	4.2	5.0	9.6	15.0	6.6	5.0
Total	...	0.2	0.4	...	2.2	4.8	4.6	4.2	0.2	0.2	...	...	3.2	3.8	2.4	...	23.0	38.5	60.4	78.2	245.8	286.4	277.8	197.9	131.6	174.7	217.6	219.5	406.0	508.8	563.2	499.8
The 7 Old Prussian Universities	...	0.2	0.2	...	2.2	3.2	3.0	3.4	0.2	0.2	...	...	3.2	3.8	2.4	...	23.0	23.4	16.0	5.6	245.8	237.2	230.4	155.7	131.6	113.6	127.8	133.3	406.0	381.6	380.1	298.0
Percentage of the Faculties at the 7 Old Prussian Universities	...	0.05	0.05	...	0.54	0.84	0.79	1.14	0.05	0.05	...	...	0.79	0.99	0.64	...	5.66	6.13	4.22	1.87	60.54	62.16	60.65	52.25	32.42	29.78	33.65	44.74	100	100	100	100

HONORARY DEGREES.

Berlin	0.2	0.4	0.2	0.8	...	...	...	...	..	...	...	...	...	...	...	...	0.8	0.6	0.8	0.8	2.4	0.4	...	...	0.6	1.6	...	0.2	4.0	3.0	1.0	1.8
Bonn	0.8	2.8	0.2	...	...	...	...	...	0.2	...	...	...	...	...	...	...	0.8	3.0	1.4	2.5	0.4	2.8	1.4	3.0	1.4	3.8	1.0	1.0	3.6	12.4	4.0	6.5
Breslau	...	...	...	...	...	...	..	...	0.4	...	...	...	...	...	...	...	0.4	0.6	1·0	0.5	1.4	2.0	0.4	0.3	1.8	2.4	1.4	1.0	4.0	5.0	2.8	1.8
Göttingen	...	1.3	1.0	1.8	...	...	...	...	...	...	...	...	...	...	...	...	...	1.0	1.0	0.7	...	0.7	1.8	0.3	...	0.7	1.4	0.2	...	3.7	5.2	3.0
Greifswald	0.6	1.0	...	0.8	...	...	...	...	...	...	...	...	...	...	...	...	0.6	0.2	1.0	0.5	0.4	...	...	...	1.6	...	1.6	...	3.2	1.2	2.6	1.3
Halle	1.4	2.2	1.6	1.2	...	...	...	...	...	...	...	...	...	...	...	...	1.0	1.8	0.4	0.3	0.4	0.6	...	...	1.0	2.4	1.0	0.5	3.8	7.0	3.0	2.0
Kiel	...	0.3	...	1.0	...	...	...	...	...	...	...	...	...	...	...	...	...	0.7	0.4	1.0	...	1.0	0.6	0.5	...	1.0	0.8	1.5	...	3.0	1.8	4.0
Königsberg	3.0	0.4	0.2	...	...	...	...	...	...	...	...	...	...	...	...	...	3.4	...	0.2	0.2	1.4	...	...	...	3.6	1.4	0.6	...	11.4	1.8	1.0	0.2
Marburg	...	3.3	0.4	1.2	...	...	...	...	...	...	...	...	...	...	...	...	...	0.7	0.4	0.5	...	0.7	0.4	0.5	...	0.7	1.2	1.3	...	5.4	2.4	3.5
Münster	..	...	...	...	...	...	...	..	1.0	1.0	1.2	0.3	...	...	...	...	..	...	...	...	...	...	...	...	0.8	0.4	0.8	1.5	1.8	1.4	2.0	1.8
Total	6.0	9.8	3.6	6.8	...	...	...	..	1.6	1.0	1.2	0.3	...	...	...	...	7.0	8.6	6.6	7.0	6.4	8.2	4.6	4.6	10.8	14.4	9.8	7.2	31.8	43.9	25.8	25.9
The 7 Old Prussian Universities	6.0	4.9	2.2	2.8	...	...	...	...	1.6	1.0	1.2	0.3	...	...	...	...	7.0	6.2	4.8	4.8	6.4	5.8	1.8	3.3	10.8	12.0	6.4	4.2	31.8	31.8	16.4	15.4
Percentage of the Faculties at the 7 Old Prussian Universities	18.9	16.4	13.4	18.2	...	...	...	...	5.0	3.4	7.3	1.9	...	...	...	...	22.0	20.7	29.3	31.3	20.1	19.5	11.0	21.4	34.0	40.0	39.0	27.2	100	100	100	100

* The numbers only go back to 1868-9.

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APPENDIX.

APPENDIX.

Note 1, p. 17.

The Distribution of the German Universities.

The total number of German universities has only been increased by 1—Strassburg—during the period considered in the present work. The increase of the Prussian universities from 7 to 10 was caused merely by territorial changes within Germany itself. The war between Germany and Denmark in 1864 resulted in the transfer to Germany of Schleswig-Holstein, which was taken not only as a spoil of successful war, but on the ground that the province was really a part of the Germanic Confederation. Austria and Prussia, as is well known, quarrelled over the disposal of the province thus acquired. This led to the war of 1866 between these two States, which ended in the defeat of Austria and the total severance of its political connection with Germany. The States of Hesse-Cassel, Hanover, Nassau, and Frankfort a/M., which had joined Austria against Prussia, were incorporated with the kingdom of Prussia, and the universities of Kiel (in Schleswig-Holstein), Göttingen, and Marburg became Prussian universities. The River Main separates North from South Germany. The following division of the German universities will be found useful in reading the present work :—

Prussian Universities.		South German Universities (6).	Universities in the Minor Confederated States (4)	University in the Reichslande (1).
Old (7).	New (3).			
Berlin.	Göttingen.	Munich.	Leipzig.	Strassburg.
Breslau.	Marburg.	Würzburg.	Jena.	
Halle.	Kiel.	Erlangen.	Giessen.	
Greifswald.		Tübingen.	Rostock.	
Königsberg.		Heidelberg.		
Bonn.		Freiburg.		
Münster.				

Note 2, p. 20.

Table showing the Dates of the Foundation of the German Universities, and of their Suppression where Suppression has taken place.

(The list includes some that are now Austrian.)

In the 14th century.

1. Prague, . . 1348
2. Vienna, . . 1365
3. Heidelberg, 1386
4. Köln, . . . 1388 (Suppressed 1798.)
5. Erfurt, . . 1392 (Suppressed 1816.)

In the 15th century.

6. Leipzig, . . 1409
7. Rostock, . 1419
8. Greifswald, . 1456
9. Freiburg, . 1457
10. Ingolstadt, . 1472 (In 1802 transferred to Landshut, and in 1826 to Munich.)
11. Tübingen, . 1477
12. Mainz, . . 1477 (Suppressed 1791.)

In the 16th century.

13. Wittenberg, 1502 (In 1817 transferred to Halle.)
14. Frankfurt, . 1506 (In 1811 transferred to Breslau.)
15. Marburg, . 1527
16. Königsberg, 1544
17. Dillingen, . 1549 (Suppressed 1804.)
18. Jena, . . 1558
19. Helmstädt, 1576 (Suppressed 1809.)
20. Altorf, . . 1578 (Suppressed 1801.)
21. Olmütz, . . 1581 (Now a theological faculty with about 100 students.)
22. Würzburg, . 1582
23. Grätz, . . . 1586

In the 17th century.

24. Giessen, . . 1607
25. Paderborn, . 1615 (Suppressed 1625.)
26. Strassburg,* 1621
27. Rinteln, . . 1621 (Suppressed 1809.)
28. Salzburg, . 1623 (Suppressed 1810.)
29. Osnabrück, 1630 (Suppressed 1633.)
30. Linz, . . . 1636
31. Bamberg, . 1648 (Suppressed 1803.)
32. Herborn, . 1654 (Converted into a theological seminary in 1818.)
33. Duisburg, . 1655 (Suppressed 1804.)
34. Kiel, . . . 1665
35. Innsbruck, . 1672
36. Halle, . . 1694

* Strassburg existed previously as a Lutheran academy. It was instituted as such by the burgomeister at the instance of the well-known John Sturm. In 1681 the city became French, and remained so till 1870. The university was revived as a German university in 1872.

In the 18th century.

37. Breslau, . . 1702	39. Erlangen, . 1743	40. Münster, . . 1780
38. Göttingen, . . 1737		

In the 19th century.

41. Berlin, . . 1809	42. Bonn, . . 1818	43. Munich, . . 1826

NOTE 3, page 81.

Illustrative of the Chapter on the Protestant Theological Faculty.

As in Prussia the Church is in many respects simply one of the great departments of State, one of the first requirements on the incorporation of the new provinces in 1866 was the making of arrangements for their ecclesiastical administration. Just before the annexation, Hanover had been reorganizing its Church in the Prussian direction. Prussia sanctioned and carried out the new arrangements, completing them later on, and still further assimilating that part of the new territory to itself by extending to it the Prussian system of theological examinations, and of the election of ministers. In Hesse the three old consistories of Kassel, Marburg, and Hanau were in 1873 merged into the one consistory of Kassel. Wiesbaden was made the seat of the consistory in Nassau and Kiel in Schleswig-Holstein. These consistories, however, are not meanwhile, like the Prussian consistories, in subordination to the Oberkirchenrath in Berlin, but are directly subordinate to the king through the Cultus-minister. As explanatory of a number of the terms used and of points referred to in the text, it may be useful here to state briefly the constitution of the Protestant Church in Prussia. As in Reformed countries generally, the king is the head of the Church. The royal supremacy* is exercised through the Oberkirchenrath—a

* This authority, to accord with Reformed thought on the subject, is regarded not as an emanation from, but as an *annexum* to, the royal office. But to such an extent is the principle carried that the (Catholic) kings of Bavaria and Saxony are actually bishops of the evangelical churches in their respective dominions. "Die katholischen Landesherren von Bayern und Sachsen (nicht der Kaiser von Oesterreich und König von Ungarn) sind Bischöfe ihrer evangelischen Landeskirchen." *Lehrbuch des katholischen und evangelischen Kirchenrechts*, by Dr. Emil Friedberg, Tauchnitz, Leipzig, 1884.

body nominated by the king and consisting of twelve partly clerical and partly lay-members. The president is a layman, and the vice-president a clergyman. The members hold office for life, and have the same position and salary as the counsellors in the other great departments of State. The number of clerical members is considerably the larger, but as these for the most part hold this office along with some other, the most important part of the business of the council falls upon its lay element. This body, among other things, advises the king on all matters of importance regarding legislation and administration, confers with the central authorities on matters in which other departments are interested, prepares ecclesiastical legislation, exercises the royal patronage in livings over £120 a year when the appointment is not vested alternately in the communes or the consistories, acts as a court of appeal in cases of discipline and grievances, takes the oversight of the military ecclesiastical arrangements, of the preachers' seminary at Wittenberg, and of some of the benevolent institutions connected with the established Church; it exercises, likewise, an oversight of the Church examinations, and the administration of the funds allocated for the purposes of the established Church.

Next below this body stand the eight provincial consistories*—one for each province of the kingdom, and having its seat in the provincial capital, viz.—Königsberg, Berlin, Stettin, Breslau, Posen, Magdeburg, Münster, Coblentz. The number in each consistory varies from six to fifteen. The president is a layman; the other members may be clerical or lay. The majority, however, as in the Oberkirchenrath, are clergymen, and their rank and salary are the same as those of the other provincial officers of State. Under the supervision of the Oberkirchenrath these

* The word was adopted into the Church from the imperial administration of the Romans. It dates from the times of Hadrian. In the Roman Church it denotes the assembly of the College of Cardinals. In England the Episcopal consistorial courts are dead. In the French Reformed Church it means the minister and elders of the parish. In Germany the consistories are the modern representatives of the Visitation Commissions sent round by the princes of the various German Reformed States to examine and report on particular phases of Church work in Reformation times. A well-known instance is the commission, of which Melanchthon was the head, appointed to inspect the schools in Saxony, and of which his well-known "libellus visitatorius" was the outcome.

bodies take cognizance both of the *interna* and the *externa* of the churches belonging to the various provinces; and, in particular, it is at their instance and under their supervision that the examining commissions conduct the theological examinations, on the results of which the consistories grant the students the license to preach and to be ordained.

The provinces, again, are divided into dioceses, over each of which there is a superintendent. In the eastern provinces the superintendents are appointed by the Crown, and hold office for life; in the west they are appointed by the local synods, but their appointment requires the sanction of the Government authorities and they hold office for six years. In the kingdom of Prussia (including Schleswig) there are 415 superintendents, each with the oversight on an average of sixteen clergymen—the highest number being 21 in Westphalia and the Rhineland and 10 in Posen. They act under the provincial consistories. They conduct the official intercourse between the ecclesiastical authorities on the one hand and the communes and the clergy on the other, and they exercise an immediate supervision on the official conduct of the clergy and the church life of the communes. In the exercise of their office they pay regular visits to the clergy and the communes regarding both *interna* and *externa*. In many districts, too, in all the provinces they act as the inspectors of schools.

Alongside of these three grades of the civil government in things ecclesiastical there are also three grades of synods—the local synod, the provincial synod, and the general synod, meeting respectively yearly, three-yearly, and six-yearly. These rest on the communal or parochial life of the Church, the arrangements for which correspond more or less with those of the Presbyterian Churches among ourselves—one main difference being that the members of the Presbytery (Gemeindekirchenrath, or, as in Scottish Presbyterianism, the *Session*) are chosen not for life, but for six years. The local synod consists of a minister and an elder from each commune contained in the *kreis* or circle. The provincial synod is a representative body, composed of deputies from the local synods, a deputy from the theological faculty of the university of the province, and a number of deputies, not more than one-sixth of all the elected deputies being directly

appointed by the Crown. The general synod is also a representative body, consisting of 150 members, six of whom are sent by the theological faculties of the universities, and thirty by the Crown. Each synod has a peculiar kind of business which it can transact, the main arrangements affecting the internal working of the Church falling to the provincial synods, and the consent of the general synod being required to all laws that are passed affecting the Church. The provincial synods and the general synod have each a body of officials empowered to act for the synods during the years in which no meetings are held. The officials (die Vorstände) of the general synod act along with the Oberkirchenrath in deciding cases affecting the doctrine of clergymen.*

As regards the theological faculties at the universities, it may be said that they are practically independent of the Church authorities, except that the Oberkirchenrath and not the cultus-minister, as in the other faculties, has the ultimate voice in the appointment of professors. The privilege of sending a deputy to their provincial synod and to the general synod unites them organically with the Church. The share, too, taken by some of them in the theological examinations helps to keep the theological teaching in touch with the Church. The seminaries at Wittenberg, Berlin, Magdeburg, Frauendorf, and Herborn supplement, but do not take the place of the theological training of the universities. Their aim is as much *erbaulich* as *wissenschaftlich*.

Close on two-thirds of the population of Prussia belong to the established Church; a little over one-third is Roman Catholic. All creeds are tolerated, but Christian dissent numbers only 96,655 inhabitants in a population of 27¼ milions. The proportion of clergy to population has gone down between the years 1815 and 1881 from 87 to 48 per 100,000 inhabitants. Between 1828 and 1881 the number of Catholic clergy has likewise gone down from 110 to 83 per 100,000 inhabitants.† There is not

* The theologically conservative tendencies of this court are noticed by Professor Conrad (p. 98). An account of some of the most recent cases will be found in Professor Bain's *Practical Essays*, pp. 335, 336.

† In Scotland the number of Presbyterian ministers is 83 per 100,000 inhabitants; if Protestant be substituted for Presbyterian, the number is 100 per 100,000 inhabitants. The proportion of Roman Catholic clergymen

a little discontent with the course of recent legislation affecting the Church. It touches materially some of the traditional functions of the clergy of both the great confessions; but the influential position which the Church derives from its connection with the State, and the weight which it is thus enabled to exercise in very many departments of the national life, do much to keep down the demand for serious organic change in the relations between Church and State. "A complete disestablishment of the Protestant Church," says the writer of the article "Prussia," in Herzog's *Real-Encyclopädie für Theologie und Kirche* (vol. 12), "would have for its natural consequence not only the withdrawing of financial aid that can ill be spared, but it would also diminish in many valuable ways the influence of the Church upon the national life; there would follow also the difficulty, which must not be undervalued, of preventing the disintegration of the Church, were the State connection severed and the position of the State authorities in the government of the Church abolished."

The Eisenach Conference (mentioned by Professor Conrad, p. 98) is an important institution, of which it would be wrong to omit all mention in a notice of the German Protestant Church. It was originated in 1852, and meets once in two years shortly after Whitsunday, and sits for eight days. It meets at Eisenach, in Saxe-Weimar, where Luther attended the Latin school or gymnasium, and close to which is the castle of Wartburg, where he was confined for nearly a year after the Diet of Worms, and where his translation of the Bible was made. The conference is composed of deputies from the supreme governing body of the Protestant Church in each German State. All the States, as a rule, send deputies. The Protestant Oberkirchenrath at Vienna was represented from the first, and even since the events of 1866 it has steadily continued its sympathy with the conference, and is still regularly represented in its meetings. Since that date, too, the new provinces of Prussia send each a deputy, who is nominated by the Cultus-minister. The conference represents the unity of the German Protestant Church. It has no legislative authority, but its recommendations carry great weight, and they have frequently been acted upon by the ecclesiastical authorities in the

to Roman Catholic population is pretty nearly the same—about one clergyman to every thousand Roman Catholic inhabitants.

separate States. During the thirty years of its existence the conference has considered very many important questions, such as the various phases of Church finance, the education of the clergy, Church extension, religious instruction in the higher schools, deficiencies in the supply of theological students, religious statistics, etc., etc. It differs from the ordinary Church conferences at home in that it is a representative body, and is composed of men who, from their position, have more or less power to see good recommendations given effect to. It has also done much to unify the practice and the worship of the Church throughout Germany. One important work undertaken by the conference at the instance of the great German Bible societies was the revision of Luther's translation of the Bible. It was begun in 1861 and was finished in 1881. Whether from the merits of the work itself, or from the way in which it was set about, the revised version has met with very general acceptance in Germany, which is, perhaps, more than can be said for the first instalment of the work of the English revisers, which appeared about the same time.

Note 4, p. 81.

On the Prussian Theological Training and Examinations.

High notions of the organic life of the State have led in most of the States of Germany to great centralization of the Government. One consequence of this is the establishment of a relationship between the central government and the various liberal professions, very different from what obtains among ourselves. The only way in which the professions in question can be entered in Prussia is by undergoing the requisite previous training, and by passing the State examinations. All the professions have the direct "guarantee of Government." *

* How this question is regarded in France may be gathered from an admirable discussion on the higher education, which took place in the National Assembly, *séances* of the 4th December, 1874, and of the 15th June, 1875. The discussion, which has been thought worthy of republication, will be found in a volume entitled *L'Université de Paris* (1200-1875) by Charles Desmaze, Paris, Charpentier et Cie, 1876. A curious historical point was brought out in the discussion by the late Bishop of Orleans (Mgr. Dupanloup)

In Prussia the clergy are examined and licensed by the provincial consistory whose constitution was briefly explained in the last note. As early as the year 1799, a series of most minute instructions were, at the special command of the king, issued by the minister Von Massow, for the education, examination, licensing, and ordaining of those who were to hold the clerical office in the Prussian State. This document still forms the basis for clerical training and examination in Prussia, although it has in course of time been modified, but mainly in the way of amplification, by subsequent enactments. The examinations then provided for were (1) *pro licentia concionandi* and (2) *pro ministerio.* They correspond closely in scope and subjects to the two examinations for license and ordination in the Presbyterian Churches of Scotland. A seemingly wide and indefinite subject in the first examination was "knowledge of books"; in the second the place of this was taken by "practical acquaintance with theological literature." The second examination was largely over the same ground as the first, but a more practical turn was given to the second examination. It included the history of dogma and a proof of "aptness in catechizing." In this last subject each candidate was provided with a class of boys whom he had to catechize in presence of the examiners, some little time previously being allowed the candidate to collect his thoughts, and to think over the order of his questions. The document also contains some excellent advice on the composition and delivery of sermons. There were nine points failure in any one of which was held to be fatal to a man's being admitted to a parish. One of these was, if in his examination, his catechizing, or his preaching, he gave evidence of speaking or thinking lightly of religion; another was, if he could not express himself correctly, clearly, and connectedly in German or whatever other language

which may be thought not unworthy of notice in a book dealing with the German universities. "Orléans avait," said the bishop, "dès le sixième siècle, ses grandes écoles, qui sont devenues l'Université de Blois. En 10 ans, on y a compté 13,555 étudiants allemands. Leurs noms sont conservés dans nos archives, et parmi eux on y trouve celui de Christophe de Bismarck, questeur de la nation germanique et qui eut querelle celèbre dans notre ville (Bruits divers). Il pretendait que les fils du Danemark, malgré la conformitè d'origine, devaient appartenir non pas à la nation normande, mais à la nation germanique" (p. 203). Prince Bismarck's claim to Schleswig-Holstein was thus an inheritance from a Bismarck of a former day.

he employed; a third was, if he could not write a Latin thesis without gross errors, that being held to indicate culpable negligence in school years, or equally culpable neglect of useful learning once acquired. This might be overlooked if a candidate did very well in other parts of the examination, and if he could at least read with ease a Latin theological book; although one who passed the examination in this way could not be admitted to a post involving the oversight of a city school, and his certificate was to be marked "*moderate.*" Other points involving failure were ignorance of the New and Old Testament texts in the original tongues, of systematic divinity, of philosophy, and especially of logic, or if the candidate had a voice and utterance so bad as to render his sermons unintelligible to his parishioners.

But the most important recent law affecting the education of the clergy is one of the well-known "May-laws" of 1873, although the law in question perhaps derived its celebrity more from the new relationship it established between Prussia and the Roman Church than from any great novelties it introduced in the training of the Protestant clergy. It enacted that none but Germans should occupy a clerical office in Prussia, and that all intending clergymen should be trained in the State universities, or in institutions which should receive the special authorization of the cultus-minister, and be open at all times to the inspection of the State. All who would enter the clerical profession must pass the leaving examination of a German (classical) gymnasium, study theology for three years at a German university, and pass the State examination. Before entering the university at all, the intending clergyman must have gone through what is usually a nine years' course of strict school education and discipline, and have passed an examination about equal to that for the Oxford B.A. degree.* After this comes a three years' theological course at

* This seems to have been the examination which the late Scottish University Commissioners had in their eye when they recommended in their report, on whose basis the present university legislation is expected, that the Arts degree should be based upon a first examination and a three years' course in any one of a great variety of branches. The triennium of study and a certain liberty of choice are perhaps unobjectionable enough; but in the present state of education in Scotland it would be next to impossible to set up a sufficiently respectable compulsory standard on which, as a basis, any great liberty of choice should be allowed. We shall in all probability have

the university. The student may study what and where he pleases in the domain of theology; only, with the consistorial examinations before him, his studies naturally lie in the direction of these examinations. The State examination takes place at the end of the theological course. It tests the student only in philosophy, history, and German literature. The Cultus-minister appoints the members—and among them the president—of the examining commission, a special examiner being appointed for each of the subjects mentioned, and holding office for one year. The examination is public, and only oral—the president of the commission determining how many candidates are to be tested at one time. No books are prescribed, but the "Instruction" issued by the minister describes in general terms the field in each of the three subjects on which the student may expect to be examined. Nothing is said in the law about how or where the subjects of the examination are to be studied. For anything the law says on the subject, they might be got up by private study, although, in point of fact, most theological students attend lectures on these subjects during the three years in which they are taking their theological course. They are encouraged to do this by a new law of 1882, authorizing duly certified* attendance at such courses of lectures to take the place of the State examination.

One point more is deserving of notice in the education of the Prussian Protestant clergy. That State leaves little to hap-hazard in the training of its professional men, but aims laboriously at

to rest content, for a considerable time to come, with something very far short of the German Abiturienten-examen as the basis of our Arts' course.

* This attendance must be certified by the dean of the philosophical faculty and by the university lecturer, whose lectures the student has attended, or by the dean alone on the certificate of the lecturer. Whatever may have been the cause of this change, with the great liberty allowed to German students, and the absence of safeguards to secure not only work but even attendance at the lectures, it seems a distinctly retrograde movement. The State of course is, as already shown, powerfully enough represented in the consistorial examinations; but the present change seems a renunciation of its direct guarantee for the efficiency of the clergy. A feeling also exists in Germany that the students should be more strictly looked after by the university authorities than is at present the case. Proposals have been made that in all the faculties there should be an examination in the middle of the student's course, corresponding to the *tentamen physicum* or first examination in the medical faculty.

adapting means to ends. As the clergy have important functions to perform in connection with the schools in their locality, the Government sees that due preparation is made for the performance of these duties. One part of the education of every intending clergyman was, as early as the year 1842, made to consist in attendance for at least six weeks at the training college for school masters connected with the province to which he belonged. His attendance was to be given after the conclusion of the university course, and between the time of the examination for license and that for ordination. The candidate will not be admitted to the examination for ordination unless he brings with him a certificate from the director of the training college that he has attended with diligence. On the work to be done at the training college there is also a carefully-drawn "Instruction" by the Cultus-minister. The probationer is meanwhile to lay aside theology and to devote himself wholly to what will equip him for his duties in connection with his parochial school. A part of the second examination is devoted to ascertaining the acquaintance of the candidate with the principles of the national system of education, with method, with subjects of instruction in the national schools, and with the history of education; and a special report on this part of the examination requires to be given in annually by the provincial consistory to the Oberkirchenrath. As late as 1878 this law was modified, but only to the extent that attendance at a training college could be avoided after passing the first consistorial examination by those who held a schoolmaster's certificate, and had served satisfactorily in a school for at least one year.

Note 5, p. 88.

On the Union of the Protestant Church in Prussia.

The union of the Lutheran and Reformed Churches was effected in Prussia in the year 1817. King Frederick William III. took advantage of that year as the tercentenary of the Reformation to bring about the union. It was opposed by small sections of both parties, who exist as separate Churches to this day. But it was very generally gone into, and it was formally consum-

mated in the year mentioned by a synod of the Berlin clergy, meeting under the presidency of Schleiermacher, and taking the communion together in a way that combined the Lutheran and Calvinistic modes. An account of the union is given in Hagenbach, *Kirchen-geschichte*, vol. vii., pp. 363-4. At present the returns of the church are classified as follows, from which it will be seen that the Separatists are not reckoned as Dissenters :—

(*a*) Members of the Evangelical State Church,		16,636,900
United,	13,266,620	
Lutheran,	2,905,250	
Reformed,	465,120	
(*b*) Separatist Lutherans,		40,630
(*c*) Separatist Reformed,		35,080

Note 6, p. 102.

Account of the Present Controversy in Prussia regarding the Salaries and Status of the Masters in the Gymnasia.

Whatever opinion may be held as to the policy of our Government in refusing to acknowledge as civil servants the teachers who act under the supervision of the Education Department, there can be little room for doubt that the refusal has contributed not a little to the peace of successive vice-presidents. It excludes the raising of a whole series of questions which are found at times excessively troublesome in Prussia, where the teachers of all grades of schools have their salaries fixed directly by the law. At least, the department fixes the salaries in all the fiscal gymnasia, or gymnasia directly supported by the State, and the communal and foundation gymnasia have soon, as a rule, to be put on the same level. The following yearly salaries were introduced in 1872 for the gymnasia and the Real-gymnasia :—

(A.) For the Directors—

(1) In Berlin, £330; (2) in towns of more than 50,000 civil inhabitants, £255 to £300*; (3) in all other places, £224 to £270.

* The maximum is reached by regular five-yearly additions.

(B.) For the Masters—

(1) In Berlin, £105 to £255; (2) in all other places, £90 to £225.

For the attaining of this scale the resources of each institution and the income from fees, which at the time the scale was fixed were all over to undergo a reasonable increase, were to be utilized. To communal gymnasia grants are given from the State funds for a fixed period, viz., seven, eight, or nine years in different provinces of Prussia; and before the expiry of this period the ability of those who have undertaken the support of a higher school is to be tested afresh, and, on the basis of this, it is to be decided whether the grant is to be continued or withdrawn.

"The new scale," says Wiese, "established the three-class system* and regulated the salaries of the directors of the State-supported schools by length of service. In this respect Berlin and towns of more than 50,000 civil inhabitants were distinguished from the rest, but in the case of the masters only Berlin is exceptionally treated. On the publication of the scale the masters of the communal and foundation higher schools naturally expected an increase of salaries. But the communes thought the new salaries too high. The scale in particular made no difference, as regards the masters, between the salaries in large and small towns, and many of the teachers, especially of the smaller gymnasia, and young men just entering professional work, had [for Prussia] large salaries, and considerably beyond what was expected. The schoolmasters, on the other hand, maintained that any addition to their salaries that had been made was no more than sufficient to meet the increased cost of living, and that a still more liberal scale should be established."

* A similar system was established by the first of the Antonines when he was governor of Asia under Hadrian. In smaller towns three professors (sophists) and three schoolmasters (grammarians), in larger towns four professors and four schoolmasters, and in the largest towns five professors and five schoolmasters were regarded as the public staff. Like the modern public schoolmaster, these were supported by grants, rates, and fees. The yearly grant from the fiscus varied with the size and importance of the town. It was paid in kind and amounted, in the case of the professor, to from £90 to £112 10s., and in the case of the schoolmaster to from £45 to £75. Marquardt, *Römische Staatsverwaltung*, vol. ii., p. 104.

In the case of the gymnasia and the Real-schools a good many of the towns followed the lead of the Government, but many could not do it even with the increase of the fees to which recourse had very generally been had, and others were quite unwilling to meet the Government scale at all, declining to bind themselves to proposals which were not contemplated in the agreement sanctioning their schools, and asking to be left free to make their own arrangements with their teachers according to merit and length of service.

Compulsion to introduce the scale was of course out of the question, but recalcitrant patrons could not wholly free themselves from its influence, and the getting and retaining of good teachers was becoming more and more dependent upon its adoption. There is no doubt that the scale did some good all over, but the grumbling and discontent which it had introduced flooded the Education Minister and the Chamber of Deputies with petitions from schoolmasters and magistrates to the effect that other than State schools should, in the matter of the masters' salaries, be treated on an equality with the directly State-supported schools. Both classes of schools, the teachers said, did exactly the same work, and the teachers should be equally treated.

As regards the position taken by the magistrates, they were repeatedly told, on the part of the Government, that, except on special grounds of public interest, the State could only help communes when these had done their very utmost for their schools; and if they could not support their higher schools the State reserved to itself the right to reduce the schools to a grade corresponding to existing circumstances.

The magistrates, on the other hand, contended that in the eye of the law all public schoolmasters were State servants, and the schools State institutions; that it was the duty of the State to endow and maintain the higher schools, nor was it competent to lay the heavier share of this burden upon the communes; "a view of the law," says Wiese, "in which it is not observed that in that case the State and not the individual communes must have the main say as to how many higher schools there should be and where they should be placed."*

* The interest a Prussian town has in being the seat of a higher school is obvious from what is stated in Professor Conrad's book, pp. 253-255. The

Owing, meanwhile, to the extraordinary rise in prices, and the increased cost of living, and especially of house rents in Prussia just after the war with France, the Government had in 1873 proposed to improve the position of all the official classes by granting an allowance for house rent. The proposal of the Budget Commission to exclude all schoolmasters from participating in this benefit increased the agitation above referred to, the result being that the teachers of the State-supported gymnasia and Real-schools were included in the favoured classes, according to the service class of the town. Few of the communes were willing to incur this new expense for their higher schools; had they done so, other communal officials would have put in irresistible claims. Again there were petitions to the education minister and the Chamber of Deputies; the old arguments about the schoolmasters being not merely communal officials but State servants were employed, but they received no countenance from the minister, and the proposal in the direction of the petitioners

want of any such powerful lever is probably one reason why public higher class schools are so slowly raised in Scotland. The Prussian system of plentiful and cheap higher schools, of which the public get the benefit, is wrought by the co-operation of the universities, the professions (including the civil service), and the State. How the want of this co-operation works in Scotland may be seen from a recent example. The governing bodies of the Presbyterian Churches have always shown a most laudable desire for a well-educated clergy, and they expend large sums annually in scholarships and otherwise towards securing this end. Ten years ago a motion was carried in the General Assembly of the Free Church that no student should be admitted to the study of theology without the degree of Master of Arts. Several years' notice was given before this law was to be put into force, but when the year came in which it was to be applied, the Assembly was obliged to rescind its own resolution and to declare that what the Free Church requires is (1) a clergy; and (2) this clergy only as well-educated as circumstances will permit. Were the universities, again, in an excess of educational virtue, to erect a too high standard of admission to their courses they might snap the bond that connects them to the professions. The whole question, in fact, is a large social question, and not merely an educational one. What the Germans accomplish by a fully developed system of higher schools we aim at accomplishing by competitive examinations, scholarships, bursaries, &c. It might be interesting to know whether all the money expended on such scholarships and bursaries is not more than would be the cost of a regular system of higher schools. There can scarcely be a question as to which system would confer most benefit on the country.

was negatived by the Chamber of Deputies in 1874. By the end of 1873, however, most of the higher schools were in enjoyment of the new scale; but except the gymnasia and Real-schools directly dependent upon the Government, only a few got the house rent increase, and there were some institutions which got neither the one nor the other.

Wiese in his last edition (1874) contrasts this reluctance of the communes to make small sacrifices for their higher schools with the tone of the famous address of Luther to "the provosts and councillors of all German towns," and augurs from it no good for the future of the gymnasia and the Real-schools; but the facts supplied in the present work seem to show that Wiese's forebodings were not well founded. Of course the minister, through the Abiturienten-examen, has a powerful weapon to enforce his views. When a commune asks for the establishment of a gymnasium (classical or Real) the minister makes it a condition of granting permission that the Government scale of salaries shall be adopted, and that no Abiturienten-examen shall be held at it till this condition is complied with. Repeated complaints on this point have been made by the communes to the Chamber of Deputies, but the Chamber has uniformly supported the education minister.

In a society (whether for good or ill) so much more highly organized than ours—a point on which Professor Conrad remarks at the close of the chapter on "The Teaching Body"—the central authorities in Prussia have trouble on points which create no difficulty among ourselves, where all classes are left to find their natural social level. A certain social rank attaches to the official classification in the Government scale, and the position there assigned to the masters of the gymnasia is held by these officials to be prejudicial to their esteem in the public eye. Notwithstanding the repeated asseverations of the Government of the high value they attach to the gymnasia and their teachers, and that the Government scale is not to be held as conferring social rank, it is not easy for the teachers to free themselves from the atmosphere of their surroundings; and as in the other German States elaborate codes (for which see Schmidt, *Geschichte der Pädagogik*, vol. iv. pp. 767-769) are laid down on the subject, the claim of the masters of the gymnasia in Prussia is to be ranked not lower than judges in courts of first instance. The

argument on which their petitions to the Chamber of Deputies are founded is that all occupants of posts implying a full academical training should be put on a level.

NOTE 7, p. 136.

On the Prussian Higher Legal Training and Examinations.

The following remarks are offered as explanatory of a number of the points mentioned in the section of the ninth chapter, which treats of the faculty of law. As in all the other professions in Prussia, those who practise law, whether as judge, public prosecutor, advocate,* or notary, must have the direct guarantee of Government for their fitness to perform their functions. The profession is scarcely to any degree ruled from within, like both branches of the legal profession in England and Scotland, but directly by the law. The course of study is based upon a full course at a (classical) gymnasium and the passing of the Abiturienten-examen. This passed, the student is required to go through a course of legal study of at least three years' duration at a German university. The law (of 1869) says nothing as to what branches of law a student must study, nor as to the order in which he must study them; he may also study at any university he pleases, and either with a professor or an assistant-professor, or a Privat-docent. His studies, however, will naturally be in the direction of the two important examinations which he has to pass. The regulations for these are laid down directly by the Minister of Justice † in subordination to the law regarding the legal examinations and the preparatory training for the higher judicial service. Of the two examinations, the first—Referendariats-examen—is essentially a theoretical one; the second—Assessoren-examen—is essentially a practical one. The first is held at the close of the university course at one of

* Since the establishment of the empire "advocate" has been dropped as an official title; members of that profession are now known only as "Rechts-anwälte."

† The present Minister of Justice, Dr. Friedberg, prepared the draft of the law of 1869; but his draft was modified in some important particulars before it became law.

the courts of appeal (Oberlandes-gerichte, of which there are nine in Prussia, formerly called Appellations-gerichte), and has for its object to find what and to what purpose the student has studied at the university. The proposal to accept the doctorate of laws from any of the universities in lieu of this examination was rejected in the Chamber of Deputies. The examining body consists of three members (in certain circumstances, four) nominated by the Minister of Justice for one year. Among other papers to be put in by the candidate before being admitted to the examination is one showing that he has served his military term. The examination is partly written and partly oral. It is on public and private law, on the history of law, and on the principles of political science. The candidate has also to write a thesis (for which he is allowed six weeks), the subject of the thesis being taken at the choice of the candidate from the civil law, German private law, commercial law, church law, civil-process law, or criminal law. The oral examination may be either public or private at the choice of the examiners. If a candidate does not satisfy the examiners he is obliged to go back to the university to study law for at least another semester. If he satisfies the examiners he has then to appear before the president of the court of appeal, who (by a law of 1843, and still in force) is obliged to inquire into the circumstances of the candidate with the view of ascertaining whether for a period of five years he has the means of living suitably to his position. The president may then reject him, either on the ground of his examination—the papers in connection with which he is entitled to examine, or because he cannot show himself possessed of the means of livelihood for five years, or because he appears unworthy to be admitted; only, the grounds of rejection must be stated. The president may also refuse to pass a candidate because in his province the number of Referendare is so large as not to leave scope for giving more the practical training requisite for the second examination. When he is admitted by the president, and takes the oath, he is called Referendare, and the period of service begins, on which by-and-by his pension from the State depends. The next four years he has to spend in practical work in the courts of first and second instance, and in learning the business of an advocate and of a notary. Minute rules are laid down by the Minister of

Justice as to how these four years are to be spent; and by the various persons under whom the Referendare successively serves reports have to be given in to the president of the court of appeal as to his conduct both within and beyond his official duties. His superiors are also responsible for his training during this period, even down to seeing that "all his papers are not only punctually prepared, but also carefully done as regards form." The Referendare has to give in an account of his work monthly to his superior for the time being, who has to examine it and to remark on it as it deserves. The aim of this probationary period of service is to equip the candidate thoroughly with an insight into practical acquaintance with Prussian public and private law; and the second or great examination, which is held at the close of the probationary period, is to test whether the candidate has so improved by this preparatory training as to show himself fit to be admitted to the independent occupancy of the office of judge, public-prosecutor, advocate, or notary. This great State examination is held at the direct instance of the Minister of Justice by three members of the Justiz-Prüfungs-Kommission.* Like the first examination, it is partly written and partly oral, is practical in its nature, and is of a very thorough description. Referendaries who do not pass it are sent back to serve at court work for a certain time longer. Those who pass are licensed for the empire. There are also regulations for a repetition of the examination, and as to what is to constitute failure. In all the regulations there is not one word about fees—a subject of so great importance in the regulation of the profession in England and Scotland. In the universities of Scotland there have always been excellent facilities for obtaining a good legal education, and of late years there has been in England a very great improvement in these facilities. Besides the flourishing law schools at Oxford and Cambridge, there is a good law school in the Victoria University, which is well attended. The attempt to associate legal education in England with the universities has thus met with some success; but it is still possible and far from uncommon to be called to the bar in such an extraordinary fashion as that so graphically described by Professor Dicey in an article in *Macmillan's Magazine* for 1872.

* A simplified form of the name—Immediat-Justiz-Examinations-Kommission—established in the year 1755 by Frederick the Great.

It is further to be borne in mind that the course of study and training above described as necessary for the higher branches of the judicial service are likewise obligatory, under the superintendence of the Minister of the Interior and the Minister of Finance, upon all the departments of the higher civil service. Candidates for that service have all to pass the first law examination. On this follow two years of practical service, corresponding to that of the law referendaries, and at least other two in the civil administration. Their second examination is on public and private law, and more especially on constitutional and administrative law, on political economy and finance. From the Prussian system of local government, the number of persons trained on the lines above described is throughout the country very considerable, and it is not difficult to see what a support is thence derived for working the whole system of higher education.

Note 8, p. 147.

On the Prussian Medical Training and Examinations.

Like the profession of law, the medical profession in Germany is not, as in our country, regulated from within by great corporations or faculties, but is directed almost wholly *ab extra* by the State. The great Ordinance issued in 1869 for regulating trades and professions in the North German Confederation, and extended after the establishment of the empire to the South German States, affected among others the medical profession. It authorized the use of certain titles after examination and license, and left any one free to practise, so long as he did not assume a title to which he had no legal claim, and which might mislead the public. The Ordinance established a central authority for each State, without licenses from which no one could practise as physician, surgeon, oculist, accoucheur, dentist, or veterinary surgeon. The assumption of any of these, or of other misleading titles, rendered liable to a fine of £15. The license was likewise declared quite independent of the doctor's degree from a German university. Such a degree, as well as the dissertation on which the granting of it

was based, might be put in by the candidate along with the other necessary documents, but it neither freed from the State examination, nor was it necessary to possess it in order to be admitted to the examination. The extent to which, in the Prussian universities, the practice of taking this degree has varied since the introduction of this Ordinance is seen in the table facing p. 286. The Ordinance established nine licensing authorities, the license from any one of which carries with it authority to practise under the legal titles throughout the empire. The Ordinance likewise reserved to the Bundesrath the right of fixing under what conditions persons might be admitted to official posts without passing the prescribed examinations. Under this provision the central authority in each State might admit a distinguished scientific man to a medical professorship, even if he had never been at a university, and had passed none of the usual examinations; and a State, or even a commune, might appoint such a one to an official medical post; only, in the latter case, the opinion of the medical examining authorities had first to be taken. A previously existing inferior grade of medical practitioner—the Heildiener—corresponding in some measure to the *officier de santé* in France, although not mentioned in the Ordinance, was acknowledged as a useful institution to the community, and its existence was continued by having a special certificate attached to it. This title is granted without examination to persons who have had no regular medical education, but who have served for some time in a civil or military hospital. They are entitled to perform simple operations, disinfections, etc.; and each year they are required to submit to the inspection of the Kreis-physicus, or district officer of health, the instruments which, in virtue of their certificate, they are permitted to use.

Imperial regulations govern the medical course of study and the medical examinations, and the central authorities in each State act in subordination to these regulations. The central authority in Prussia is the Education Minister, whose full title is "Minister of Ecclesiastical, Educational, and Medical affairs." In each of these great departments he is assisted by a special council. The course of medical study is at least four and a half years. At the end of the first two years comes the first examination, conducted by the professors of the university in which the student is matri-

culated, and under the presidency of the dean of the medical faculty. Before being admitted to this the student must show the certificate of having passed the Abiturienten-examen at a (classical) gymnasium of the German Empire (see above, p. 298). The examination is oral and public, and the dean of the medical faculty is required to be present throughout. The subjects are anatomy, physiology, physics, chemistry, botany, and zoology. The examination costs the student 36s., which is divided among the dean and the examiners. The State examination is held two years later. The examining commission is appointed yearly by the State authorities on the recommendation of the medical faculty of the university, and consists practically of university professors. Of course, with the wide choice of teachers which a medical student has, there is not so much risk, as elsewhere, of his teacher being also his examiner. The examination includes the seven great departments of anatomy, physiology, pathological anatomy and general pathology, ophthalmology, medicine, midwifery, hygiene. Minute rules, which apply to all Germany, are laid down for the conduct of the examination. The fees for the whole amount to £10. The report of the examination is made by the president of the commission to the central authority of the State, which gives or withholds the license to practise. The names of the licentiates are published in an official journal.

There are also imperial regulations for the examining and licensing of dentists and veterinary surgeons. In general education, candidates in both of these subjects must be certificated as fit to be admitted to the highest class of a (Real or classical) gymnasium; and minute regulations, applicable to the whole country, are laid down for the professional part of the examination. Dentists are required to study for at least two years at a university. A subject to which in Prussia the department pays special attention is midwifery. The provinces are divided into midwifery districts, and the provincial authorities are required to see to the requisite supply of midwives, who are regularly trained, examined, and licensed officials. The minister also licenses chiropodists and bandage and surgical instrument makers.

Note 9, p. 165.

On the Training and Examination for the Prussian Higher-School Service (Examen pro Facultate Docendi).

The line between the different grades of education is much more clearly marked in all the German States than in England or Scotland. In Germany it is one of the functions of a great department of State to organize and regulate education from top to bottom—from the university to the elementary school. Whatever disadvantages attach to this centralization of authority, one clear advantage it possesses, besides many others, is that it renders possible the compilation of such an admirable and complete set of statistics as the present volume gives. The education service is one for which no imperial provisions are made; each State is allowed to regulate its own concerns in this subject. The only exception to this general remark—besides the exception already noticed in connection with the professional faculties—is that all the States put so much stress upon having as perfect a system of schools as possible between the elemenary schools and the universities, that the well-known Abiturienten-examen is practically uniform. There are eleven rules laid down regarding this examination which all the States are bound to observe. These rules regulate the age of admission to the gymnasium, length of the course, subjects of examination, etc. On the qualification for the higher-school service there is no agreement between the States; but in the Reichslande, in Mecklenburg, and in the kingdom of Saxony, the qualifications are the same as for Prussia. Prussia was the first State to institute a special examination for the higher-school service. This it did in 1810. In most of the States the example was not followed till after the beginning of the *thirties*, and in Austria such an examination was not introduced till 1848. In Prussia, where the present code dates from 1866, the examination *pro facultate docendi* implies a full university curriculum (and of course, as preliminary to that, a full gymnasial course), and in this way is justified a special notice of it in a work on the universities. The examination in question must be passed by every one who acts as a teacher in a gymnasium, a pro-gymnasium, a Real-school, or a higher burgh-school—terms which are all explained in

the text. Like the examinations for the other professions, this is a State-examination; and as in the other professions—with the exception, perhaps, of the clerical profession—there seems to be a growing disinclination on the part of the Government to abdicate in favour of the universities what it considers its own proper functions as regards testing the qualifications of those whom it will admit to the higher educational service. One part of the examination for the *facultas docendi* consists in the writing of a thesis—for the writing of which six months are allowed—on some philosophical or educational topic. In place of this the code permits the substitution of the academical dissertation, on which the doctorate of philosophy is based, so far as that dissertation covers the department or *fach* in which the candidate proposes to teach; but if he intends to teach in any subject beyond the domain of his dissertation, he is bound to satisfy the examining commission of his knowledge in that subject by writing a new thesis. The code seems to imply that cases have occurred which throw suspicion on the university degree. Holders of this degree seem in some cases to have shown defective knowledge and unsatisfactory general culture when they came up to the provincial commissions for examination; and when these defects are so glaring that the commission cannot pass the candidate who holds a university degree, the code requires the president of the examining commission to make a special report of the case to the education minister.

The preparatory training for the higher-school service consists of a three years' course at the university, and a year of practical (and practically unpaid) work in a gymnasium. Nothing is said as to the courses to be attended at the university, although the student will naturally attach himself to the philosophical faculty, and take courses that lie in the direction of the State examination, which all must pass. But so far as the code is concerned, a man might study while at the university nothing but theology or law so long as he puts in his three years, and is able to satisfy the examining commission on the subjects which are minutely specified in the code. Nothing, for example, is laid down as obligatory as regards attendance even at a course of Pädagogik; but this subject comes under the head of "the general culture," which every candidate must show himself to possess before the examining commission. Nothing is said in the

code as to how, when, or where the requisite knowledge is to be acquired; all that is required is that the candidate must show himself to possess it when he comes up for the State examination. The examination is divided into the two great heads of (1) general culture and (2) special branches. The examination on general culture is on branches of knowledge other than that to which the candidate proposes specially to devote himself. It includes the subjects of the creed of his particular religious confession,* philosophy and pädagogik, history, geography, and languages. What is required in the branch of "philosophy and pädagogik" is contained in article 28 of the code, and is as follows :—

> "From every candidate for the higher-school service is required a knowledge of the most important laws of logic, and of the main points in empirical psychology. Every candidate must also give evidence that he has read with attention and intelligence some important philosophical work—the choice of the work to be left to the candidate. The oral and written examination must give evidence that the candidate has already attained to some power of independent thought. The candidate must also show some knowledge of the history of philosophy—especially of ancient philosophy in the case of those who purpose to teach classics—and a general acquaintance with the history of modern pädagogik and the essential points in method."

This is required from all candidates as a branch of general culture. If a candidate proposes also to give the elementary teaching in philosophy—philosophische Propädeutik—which is given at the gymnasium, he has then to pass a much more serious examination in philosophy—which is treated as a special *fach*—and to show a more thorough knowledge of the history of education, and especially of its development since the sixteenth century.

The "special branches" on which the State-examination is held are comprised under the four great departments of (1)

* Jewish candidates for the higher-school service are not examined in eligion.

philology and history, (2) mathematics and science, (3) religion and Hebrew, (4) modern languages. They include these eight subjects:—A. Greek and Latin; B. German; C. Modern languages; D. History and geography; E. Theology and Hebrew; F. Philosophy and pädagogik; G. Mathematics and physics; H. Chemistry, zoology, botany, mineralogy. In these branches the certificates are graded according to the results of the oral and written examination into three grades, in accordance with which the candidate is authorized to teach in the lower, the middle, or the higher classes of a gymnasium. Holders of the lower grade certificates may be subsequently admitted to the higher grades, not however by any length of service—however long and meritorious—but only by passing the corresponding examinations. This is a point in the code to which special exception is taken. Too much stress is thought to be laid upon mere knowledge of the special subjects, and too little upon aptness to teach. The examination is considered by competent authorities to be the most difficult of all in connection with the State services. The demands seem particularly high in mathematics and science; and there seems room for the remark of Schmidt* that the profession of theology, or law, or medicine can in Prussia be entered on much easier terms than the higher educational service. Be this as it may, the first class certificate is a very reliable guarantee for a thorough acquaintance—at once extensive and deep—with the subject for which it is granted. The examination costs the candidate 24s. Minute regulations are also laid down as to how the year of probation—*Probejahr*—is to be spent. It must be spent, as a rule, at a gymnasium (classical or Real), and only in exceptional circumstances requiring the consent of the education minister at a pro-gymnasium or higher burgh-school. No school can have more than two such probationers at one time. The probationer teaches from six to eight hours weekly, under the supervision of the director and masters—men of experience, from whom he receives hints and instructions on the maintenance of discipline, on the best modes of teaching, and on school management generally. For the year of his probation he is a regular member of the school staff; he has the right and the duty to give his opinion (under revision of the class master) on the promotion

* Geschichte der Pädagogik, vol. iv. p. 780.

of pupils, and to attend the general conferences of the masters. His work is, as a rule, unpaid; but if the funds of the institution permit of it some remuneration may be made him for his services. At the close of his year the director of the gymnasium writes a report on his work to the school board for the province, which issues him a certificate according to the nature of the director's report.

Note 10, p. 172.

On the Prussian Training and Examination in Pharmacy.

Pharmacy affords a good example of the different ways in which the professions are regulated in England as compared with Germany. In both countries the existing regulations for this profession were curiously enough made about the same time. The Gewerbe-Ordnung, or ordinance for regulating trades and professions in all Germany, was issued in 1869; the English Pharmacy Act was passed in 1868, and applied only to Great Britain, Ireland being excluded. The principle of both was the same; the use of a certain title—in Germany, apothecary, and in England, chemist and druggist—was authorized by public authority, and the illegal use of this title is punishable by fine. In Germany there is a special license for apothecary, the license of the medical practitioner not carrying with it, as it does among us, the right to make and sell drugs. Previous to 1868 in England the practice of pharmacy was unrestricted—any one might engage in it. In Germany the number of apothecaries' shops is restricted by law, and the apothecary has always been more or less a public functionary, requiring a special license, granted after examination by public authority. Imperial regulations are laid down for the training and examination, while it is left to the central authority in each State to carry out the examination and to grant the license. The preliminary education required is, as in all the professions, higher than in England. In this respect, perhaps the only one in which the principle of compulsion can be applied to education above the elementary stage, Germany makes much more serious demands than England. We seem to go on the supposition that a man is not to be precluded from the exercising of

acquirements which he has merely because he has not others along with them—a view for which a good deal can be said, although it also doubtless tends to keep down the level of English education. Another point in German policy is that whenever a profession can be connected with a university the connection is established. The theoretical part of an apothecary's education must be gained at a German university, which he must attend for at least three semesters. Still, there is a feeling in Germany that this part of the education would find a more appropriate place in the technical high school. The examination for license also is held at the universities by a commission appointed by the central authority. It consists of a lecturer in each of the subjects of chemistry, physics, and botany, and two apothecaries, or, in place of one of these, a lecturer on pharmacy. In England all that is required for license after the preliminary examination is three years' service and the passing of an examination in certain subjects. Attendance at university or other lectures is not required. In all Germany, by imperial regulation, there is required first an apprenticeship of three years, then a three semesters' course at the university, and then three years' further service before a candidate may be admitted to the examination. It is this necessary connection with the university which justifies the treatment of the subject as a special branch of university study. Nothing is said as to the course to be pursued, but it will naturally lie in the direction of the examination which covers much the same ground as the English examination, and costs £7. There is also throughout Germany an inferior license of apothecary's assistant, for which an apprenticeship of three years and an examination costing 24s. are required. The Pharmacy Act in England gave a charter to the Pharmaceutical Society of Great Britain and restricted the title "chemist and druggist" to all existing as such at the passing of the Act, and to persons afterwards licensed by the Society. While thus practically abdicating functions to which in Germany the central authority tenaciously clings, Government among ourselves still exercises a modified sway over the licenses by having a representative of the Privy Council on the examining board of the Society. In conferring these rights, however, the State has not unfrequently created what in time became powerful corpora-

tions from which, in many cases, has emanated the most serious opposition to reforms in the public interest.

Note 11, p. 176.

On the Prussian Training in Forestry.

Forestry is a subject to the scientific development of which great attention has long been paid in Germany. Possibly the abundant supply of coal in Britain is one of the main causes which have prevented it receiving at home the attention it is now generally admitted to deserve. In Germany it is a great industry and a considerable source of communal and State revenue. In Prussia 23·35 per cent. of the entire surface of the country is forest land, in Würtemberg it is 31·23, and in Baden as high as 35·90. As on every subject capable of scientific treatment there is a large German literature on forestry. Each large State has a forestry school. In Würtemberg, Hesse, and Bavaria, it is a branch of university study. In Prussia it has no connection with the education department, but is under the control of the Finance Minister, to whom it annually brings in over one million pounds sterling of clear revenue. It is treated as a regular branch of the civil service, and an elaborate code exists for its regulation, as for the other great branches of the service. Prussia has two great schools, one at Eberswald near Berlin, and the other at Münden in Hanover. They stand on the same level as the universities so far as regards the previous training requisite to enter them. No one can enter who has not passed the Abiturienten-examen at a gymnasium (classical or Real), but in either case excellence in mathematics is imperative. The higher forestry service is practically a career for the rich, as no one is admitted to these academies who cannot produce before, and as a condition of, entrance, evidence that he can support himself for at least six years. The first year of the apprenticeship is spent in practical work under an upper forester. The aim of the academies is declared to be not only the training of the State foresters, but the general advancement of the science of forestry. The staff of each consists of—

1. A director, who is also lecturer on forestry (appointed by the king on the nomination of the Finance Minister), and at least
2. Two lecturers on science.
3. One lecturer on mathematics.
4. One assistant-lecturer on forestry.
5. One assistant-lecturer on law in relation to forestry.

The subjects of instruction are—

1. Forestry—the subject being divided into eight great divisions.
2. Science—including chemistry (organic and inorganic), physics (mechanics and meteorology), mineralogy, botany (anatomy and physiology of plants), zoology (with special references to birds and insects)—these branches of science being treated in their bearings upon forestry.
3. Mathematics (arithmetic, planimetry, trigonometry, geodesy, forestry measurement).
4. Law—under six heads in its relations to forestry.

In his supervision of the academies, the Finance Minister is assisted by the head of the forestry department who in this capacity acts as curator of the academies and holds somewhat the same relation to them as the curator (see above, p. 23) holds to the universities. The course at the academies is one of two years, and there must not be more than eighty students at one time. There are two semesters as at the universities. The matriculation fee is 15s., and the fees are £3 15s. per semester. The account of the long and carefully supervised training for this service given in the new edition of the *Encyclopædia Britannica*, article "Forests," is very clear and correct.

NOTE 12, p. 217.

On 'Bread' Studies at the German Universities.

The German universities, like the Scottish, are professional training schools, as well as institutions for giving the general culture of the arts or philosophical faculty, although, through schoolmastering the last named faculty in both countries has also

a distinct professional value; and wherever this is so, there will as a rule be room for such statements as those in the text. It is only a small minority of men who are not obliged in one way or another to work for their bread; and as the universities are made (in Germany by the authority of Government, and in Scotland by the authority of the professions) the authorized institutions at which professional knowledge must be acquired, the charge in question will always have more or less foundation. Men will be said to go to the university not so much with a view to general culture, as to acquire knowledge that may afterwards be useful as a means of livelihood. In Germany at present the study of "Brotwissenschaft" seems to be one that is very sedulously cultivated. The poet Hoffmann von Fallersleben gives expression to a widespread feeling in the lines—

> "Geld und Brot, und Brot und Geld!
> So schreit die Welt;
> Das ist die einzige Mannichfaltigkeit
> In dem langweiligen Liede unserer Zeit.
> Brot ist das einzig Universelle
> Unserer Universitäten—
> Dies reimt sich nicht, ist aber doch wahr,
> Und wer's nicht glaubt, dem wird's mit der Zeit noch klar."

To resist this tendency, German university reformers look longingly back at the genuine scientific spirit from which sprang the university of Berlin. There is certainly small room at the present day in Germany for repeating the resolution of King Frederick William III., the translation of which into fact by Humboldt produced that famous university—"Der Staat muss durch geistige Kräfte ersetzen, was er an physischen verloren hat." The danger in the present day is the very opposite. The fear is that "Geist" may be crushed under the weight of material prosperity. The rush to the universities, at all events, is at present unusually great. Never had the State more candidates for its service in all branches, which has been traced by Prof. Conrad, to a variety of causes. But the danger of the universities degenerating into institutions for the promotion of mere "bread" studies is not one that has been only recently felt. Before the university of Berlin was founded the Prussian Government had many advisers, and many "ideal universities" were framed. In 1804, Fr. A.

Wolf declared that the universities aimed at too much, and did nothing satisfactorily. "Acute vidit nuper ingeniosus scriptor periodici libri hoc praecipue vitio laborare majorum scholarum institutionem, quod eas non minus minutis (civilis) vitae usibus aptas, quam ad culturam maximarum, quibus natura hominis informari potest doctrinarum, utiles esse velimus. Ita vero fieri ut neutri horum consiliorum satis conveniant nec ad spem respondeant." Fichte advocated that admission to the university should be granted to none but to those who were determined to pursue knowledge for its own sake, and to those who were in training for the higher service of the State; "bread" studies at least were to have no place in it. Philosophy was to be the great study, and even theology was only to be tolerated in so far as it admitted itself to rest upon the revelation of nature. The great aim of the true university was to be the training of those who were afterwards to be professors, for Fichte complained that it was far too much taken for granted that because a man knew a thing he could therefore teach it. Professors-emeriti were to be admitted into the academy, which was the summit of the intellectual hierarchy. Schleiermacher, again, shrank from the exclusion of any branch of knowledge. But in all students, without exception, the spirit of the mere handicraftsman was to be vigorously resisted. In no other way than by higher training, and the possession of the true scientific spirit, could the future servants of the State be stimulated to a desire for improvement, and only thus could the flow of the national life be kept in healthy motion. The real centre of the university, however, was to be the philosophical faculty; and theology, law, and medicine were to be merely special schools. "The university must comprise all knowledge, and only in the degree that it cares for each individual branch can it express its natural and essential relation to knowledge as a whole." Since the days of these great thinkers there has never been wanting in Germany a succession of writers advocating, on the one hand, the total separation of the professional faculties from the university, and, on the other, a closer union between these faculties and the philosophical faculty. Among ourselves the former of these views is not without its supporters—Professor Bain, for example, holding that professions can quite well be learned apart from the universities.

But while these and various other reforms are thrust upon the

German government, that government holds steadily upon its way, insisting that all its professional men shall be trained at the national universities. At the same time, it must be allowed to have done its utmost to counteract the narrowing influences of merely professional study by insisting, in all the more important professions, upon the magnificent previous training of the gymnasium. With our self-governed professions, and in some cases with competing examining boards in the same profession, the substitute for this is often of the flimsiest description. In some of our professions called "learned," the governing authorities are graciously willing to accept the degrees of a long array of home and foreign universities as a substitute for the preliminary knowledge usually required as the condition of entering upon professional study; but they are also willing, in the event of such a degree not being forthcoming, to accept an amount of knowledge that may, without much difficulty, be scraped together in a few weeks by one who may have had but a very indifferent school training. What our professions guarantee is professional capacity (in most cases), and as much general culture as, in the opinion of the governing authorities in the profession, is required to render the profession respectable in the eyes of the community. Now, the German governments will have none of this. Under imperial regulation, they guarantee the professional man not only as capable in the work of his profession, but as a well-educated man all round; and they secure this not by any mere examination, but by a long course of training, accessible from its cheapness, comparatively speaking, to all, with a serious examination as its natural close. Much, no doubt, may be said on social and economical grounds for the British system; but the high level of attainment, consequent upon the long and thorough previous training, required for entering upon professional study in Germany, cannot fail to do much to elevate the study of the merely professional courses. Still it should not be overlooked, in connection with Professor Conrad's statement in the text, that these courses contain in their subject-matter the basis of a liberal culture; and one aim, doubtless, of their connection with the universities is that they may there receive such a thorough scientific treatment as to provide this to all who prosecute them in the right spirit. It is a scientific acquaintance with his profession which the student acquires at the

university, and it must always rest with the individual student how far he will make the study of his profession a subject of real mental culture. That these studies may and do often degenerate into mere "bread" studies is undeniable; but it is equally clear that there is no obstacle but the student's own inclination to their being very much more. One curious point is that Prof. Conrad is willing to allow the mercantile career (p. 284) to be liberalizing, while he regards the professional student as working only with a view to a livelihood. Schopenhauer regarded the merchant as the only honest man, because the object of his exertions was money-making, and he honestly admitted this as his main motive, while professional men, he said, had the same object in view, but put forward other motives.

NOTE 13, pp. 222-224.

On the inter-relations of the Higher-Schools, the Universities, and the Professions in Germany ('the Classical Controversy').

We have here another point in which our Government consults its own peace by ignoring intermediate education altogether and by leaving the higher schools, the universities, and the professions to adjust their mutual arrangements. An excellent account of the controversy referred to in the text, has been given in a paper contributed by Professor Jebb to the April number of the *Glasgow University Review*. The Prussian Government, as has been frequently mentioned in these notes, regulates all the professions and the conditions of admission to professional study. This is naturally taken for granted by Professor Conrad, but it is too often overlooked in English discussions on German higher education, and yet it is of the very essence of the question. For entering some of the professions, as previously shown, there are even imperial and not merely Prussian regulations. In Prussia one of the conditions has always been that those who would enter any of the professions, must attend the university, and as a prior condition to this must attend a (classical) gymnasium, and pass the leaving examination. Besides thus serving as the preparatory training schools for those who wish to enter the professions, these

gymnasia were largely utilized by those who had the time and the money to take a thorough education, but had no intention of entering a profession. The education of the gymnasium, it must be remembered, was, and is mainly, on the traditional classical lines. The outstanding points in the history of the Real-school are traced by Prof. Conrad in the text (pp. 219 *sqq.*), and need not be given more fully here. Prof. Conrad naturally assumes acquaintance, on the part of his readers, with the *Lehrplan* of the gymnasium and the Real-school ;* but as illustrative to the English reader of points that are continually turning up in the present work, it may be useful to state in tabular form the plan of studies at each.

General plan of Studies of the Prussian Gymnasium.

	VI	V	IV	III	II	I
Religion, ...	3	3	2	2	2	2
German, ...	2	2	2	2	2	3
Latin, ...	10	10	10	10	10	8
Greek, ...			6	6	6	6
French, ...		3	2	2	2	2
History and Geography, ...	2	2	3	3	3	3
Mathematics,	4	3	3	3	4	4
Physics, ...					1	2
Natural History,	2	2		2		
Drawing, ...	2	2	2			
Writing ...	3	3				
Number of hours per week, ...	28	30	30	30	30	30

General Plan of Studies of the Prussian Real-Gymnasium.

	VI	V	IV	III	II	I
Religion, ...	3	3	2	2	2	2
German, ...	4	4	3	3	3	3
Latin, ...	8	6	6	5	4	3
French, ...		5	5	4	4	4
English, ...				4	3	3
Geography and History, ...	3	3	4	4	3	3
Physical and Natural Science,	2	2	2	2	6	6
Mathematics,	5	4	6	6	5	5
Writing, ...	3	2	2			
Drawing, ...	2	2	2	2	2	3
Number of hours per week,	30	31	32	32	32	32

It may further be stated that the course at each is as a rule nine years. A year is spent in each of the three lowest classes, and as a rule two years in each of the three highest. Admission is not allowed before the ninth year, and the course should be finished by the eighteenth; but to this, as shown by Prof. Conrad (pp. 36 and 226) there are very numerous exceptions. The main difference between the two institutions is at once perceived to be that the Real-school teaches no Greek, and while it teaches Latin

* The term Real, as applied to schools and subjects of study, is derived from Reformation times. Erasmus and Melanchthon protested against the too exclusive grammatical and merely verbal study of the classics. They insisted on the study of *res*, *realismus*. At first even this was largely verbal —verbal realism, as the Germans call it. Real realism came later; it was the outcome of Bacon's teaching, and is now represented by modern science.

it does not devote to it nearly the time or the attention that is given to that subject in the gymnasium.*

The Real-school, on the other hand, devotes more time than the gymnasium to modern languages, science, and mathematics. The Abiturienten-examen has been in existence at the Real-schools since 1832, but up till 1870 the Prussian government refused to recognize its course as preparatory to any branch of university study. All who wished to prosecute their studies after finishing the Real-school had to do so at a polytechnic or technical high school, and all who wished to enter a profession must have gone through the gymnasium and not the Real-school in order to be admitted to the university where, and where only, professional studies could be pursued. The Real-schools have complained loudly of the exclusive attachment of this privilege to the gymnasia, and they have been insisting, hitherto with but limited success, that their course should also be recognized as preparatory to entering the university with a view to professional study. With our views as to what is requisite in the way of general training in order to enter a profession, we can only wonder that the claims of the Real-schools have not been conceded long ago. It would be a mighty educational advance in our country, if even the Abiturienten-examen of the Real-school was required from all intrants into the professions. But in Prussia, as already said, things are viewed differently.

In the year 1869 the Education Minister issued a note to the nine Prussian universities (Münster not being included) asking whether, and to what extent, Real-school men might be admitted to the studies of the universities. Each of the four faculties in each university gave a separate answer. The result may be stated in the words of Prof. Jebb :—

* An able but anonymous writer against the classical or gymnasial course (*Betrachtungen über unser classisches Schulwesen, Leipzig*, 1881), puts neatly the conflicting claims of Greek and Latin as follows (p. 16)—"Some Hungarian statesmen, lately wishing to promote the interests of their State by a reform of their schools, consulted Max Müller, of Oxford, as to the advisability of introducing the German gymnasial system. The reply of Max Müller was, that Latin was indispensable but that Greek might be omitted. Eduard von Hartmann, on the other hand, gave it as his opinion that Latin might go, but that Greek could not be dispensed with. The statement of two such opinions," adds the writer, "gives room for thought."

"The collective sense of the answers was overwhelmingly against the admission of the Realschüler. At Bonn, as at Breslau, there are two faculties of theology, one Catholic, the other Evangelical; so that, in all, eleven faculties of theology replied. Every one of them said No. Out of 9 faculties of law, 7 said No, and 2 said Yes. Out of 9 faculties of medicine, 5 said No, and 4 said Yes. Out of 9 faculties of philosophy, 4 said No; 2 said Yes; and 3 returned a conditional affirmative. The net result was thus, 27 Noes, 8 Ayes, and three conditional Ayes.

"Among these, the answer of the Berlin Faculty of Philosophy (Dec. 13, 1869) was a most decided and emphatic No. It bore 21 signatures—the names of men illustrious in the most various branches of science and letters. They were these:—Curtius, Haupt, Müllenhoff, Kirchhoff, Dove, Trendelenburg, Rödiger, M. Ohm, G. Rose, Droysen, Weierstrass, Von Raumer, Magnus, Kummer, Weber, Harms, Beyrich, W. Peters, Mommsen, A. Braun, E. Helwing. It will not probably be said that such a body represents exclusively 'the medieval prejudice' in favour of the humanities. This is what they wrote to the Minister of Public Instruction:—

"'While the university has no reason to withhold its advantages, it must not, in its desire to make the higher education accessible to the greatest possible number, forget its peculiar purpose and its historical task. Its duty is to fit the youth for the service of State and Church, after they have received sufficient preparation. The view that the complete gymnasium course is such a preparation is still, at the present day, fully justified. *The instruction of the gymnasium centres in the classical languages, the methodical study of which necessarily carries with it manifold logical and historical training. They furnish the most difficult,* and for that very reason also the most effective instrument of instruction,* and it is for the interest of the State that all to whom it expects to intrust its offices should go through this intellectual training, substantially supplemented as it is by mathematical instruction, and thus gain for themselves *a liberal and many-sided culture, such as they could not attain in any other way.*'

"Referring to the teaching of the natural sciences in the Realschule, they went on to say:—

"'It is the general experience that the foretaste of these sciences obtained in the Realschule frequently dulls rather than stimulates eagerness for knowledge. Still less are the modern languages able to take the place of Greek and Latin; for, since as a rule the only thing aimed at in their study is a certain facility of use, they cannot serve in equal manner as an instrument of culture. . . . In a word, it has not been possible to find an equivalent for the classical languages as a centre of instruction; and therefore the university cannot deem it advisable for the State to cease to require a gymnasium training for its future functionaries.'

* On this point the anonymous writer referred to in the previous note quotes an opinion of Prince Bismarck that "Russian, with its 24 conjugations, might well be admitted as a substitute for Latin." "It would have the additional advantage," adds the writer, "that it would prove useful in the event of war."

"They further notice the fact that 'the directors of Realschulen themselves, who have the highest conception of the special work of their own institutions, have with great decision fixed the requirement that teachers in the Realschule, like teachers in the gymnasium, shall be such as have had a classical training—that is, such as have been prepared for their profession in the gymnasium and the university.' Then comes a remark which is not without significance for commercial communities in our own country. 'Even in the circles for whose benefit the Realschulen originated—in the great commercial houses, and in industrial institutions, the experience of our times proves that those young men are more welcome who come from the *Prima* (the highest class) of a gymnasium. If, then, in those very circles a decided current has set in against the earlier overrating of the Realschule, why should the university surrender its organic union with the gymnasium, and be willing to obliterate a distinction in education whose existence cannot be denied?' It is desirable that the training of the State's future servant should have been, 'up to the beginning of his academical career, liberal, general, and not narrowed by considerations of future professional aims.' The report concludes with an emphatic re-statement of its authors' cardinal point:—'They are convinced that no sufficient compensation is given in the Realschule for the lack of classical education.'

"Thus, in December, 1869, spoke the Philosophical Faculty of Berlin. They declared, 'in the most positive manner,' against dispensing with the classical basis of a liberal education. Seeing that they represented authoritative opinions in various branches of science, no less than of letters, the protest was most weighty. And it was only one of twenty-seven documents, to the same general effect, representing nine universities.

"But other influences prevailed. In 1870 the Realschüler were admitted to the universities (as explained in Prof. Conrad's text).

"Ten years elapsed. Once more, in March, 1880, the Philosophical Faculty of Berlin addressed the Minister of Public Instruction. This time it was no longer for the purpose of estimating the probable effect of a proposed change. It was to state the actual results of an experiment which had been tried on a large scale for ten years. For ten years, and in progressively increasing numbers, Realschüler had been entering the Philosophical Faculty of Berlin. Every teacher in that faculty had furnished reports of his experience as to the relative qualities of Realschule and gymnasium students. The material thus collected had been carefully sifted by the entire faculty at a series of meetings. The memorial eventually sent to the Minister was *unanimously* adopted at a meeting held on March 8, 1880. Since Dec., 1869, death and other causes had made many changes, and the number of teachers belonging to the faculty had also been largely increased. Instead of the 21 signatures of Dec., 1869, there were now 36. There is no room, then, for the suggestion that it was merely the same group of eminent men, bent on enforcing the correctness of a view to which they were personally committed. If the former list of names was striking, the list of 1880 is certainly not less so:—'Droysen, Kummer, Zeller, Helmholtz,

Lepsius, Mommsen, G. Kirchhoff, Mullenhoff, Curtius, Vahlen, Peters, Harms, Nitzsch, Wattenbach, Schrader, A. W. Hofmann, Weierstrass, Beyrich, A. Kirchhoff, Wagner, Von Treitschke, Weber, Schwenderer, Scherer, Hübner, Tobler, Eichler, Sachau, Grimm, Schmidt, Kiepert, Websky, Rammelsberg, Foerster, Zupitza, Robert.'

"The memorial commences by respectfully recalling the fact that, in 1869, the faculty had deemed it 'imperative, in the interest of the thorough and symmetrical preparatory training of their students, to hold fast to the requirement of a gymnasium preparation for all branches of study falling within their jurisdiction.' The requirement having now been set aside, in the case of a number of those studies, for ten years, 'they deem it neither premature nor superfluous to lay before "the Minister" the results of their experience during that time with reference to the effect of the change introduced; respectfully pointing out at the same time that the practical effects of the arrangement at present existing could not, in the nature of the case, be seen until some time after its first introduction on a large scale.'

"The memorial then adduces the testimonies furnished by members of the faculty engaged in teaching (1) Mathematics, (2) Astronomy, (3) Chemistry, (4) Natural History, (5) Modern Languages, (6) Philosophy, (7) Economics and Statistics. The gist of all these testimonies is the same. The Realschule student starts with a certain advantage in knowledge of *facts*. But the gymnasium student has the better-trained *intelligence*. The Realschule student often goes ahead at first. But the gymnasium student catches him up and, in the end, leaves him behind.

"Thus the representative of astronomy remarks that the Realschuler, 'although at first, perhaps, better informed and more apt than those who have been prepared in the gymnasium, nevertheless cannot in the end bear comparison with the latter, their further development being slower, more superficial, and less independent, while they suffer especially in a greater degree from whims of independence and lack of self-knowledge.' The Berlin Professor of Chemistry says:—'The students from the Realschulen, in consequence of their being conversant with a large number of facts, outrank, as a rule, those from the gymnasia during the experimental exercises of the first semester; but the relation is soon reversed, and, given equal abilities, the latter almost invariably carry off the honours in the end; the latter are mentally better trained, and have acquired in a higher degree the ability to understand and to solve scientific problems.' A professor of the German language and literature says:—'To judge from my experience, it is simply impossible for one who has been prepared in the Realschule to acquire a satisfactory scientific education. No man acquires it by means of the modern languages alone, nor without a solid foundation in the training of the gymnasium.' A professor concerned with economics and statistics thus describes the characteristic defect of those young men who had not enjoyed the gymnasium training:—'Even when they have completed a course in some academical study, they have no clear consciousness of their

own scientific capacity, and no sure insight into the growth of man's mental life.'

"After quoting these statements of particular teachers, and more to the same effect, the memorial proceeds to sum up, and to express the collective and unanimous judgment of the Berlin Philosophical Faculty. It is as follows:—

"'For the undersigned faculty, these verdicts of so many of their instructors serve only to strengthen the conviction that the preparatory education which is acquired in the Realschulen of the first rank is, taken altogether, inferior to that guaranteed by the diploma of a gymnasium; not only because ignorance of Greek and deficient knowledge of Latin oppose great obstacles to the pursuit of many branches of study which are not by law closed to graduates of Realschulen; but also, and above all, because the ideality of the scientific sense—interest in learning not dependent upon nor limited by practical aims, but ministering to the liberal education of the mind as such—the many-sided and widely-extended exercise of the thinking power—and an acquaintance with the classical bases of our science and our civilization—can be satisfactorily cultivated only in our institutions of classical learning. . . . The fact that our Realschulen of the first rank dispense with Greek altogether, and in Latin stop several steps lower than the gymnasium, exerts upon the sum-total of the intellectual training and preparation an influence very noticeable in its wider consequences.'

"It will be observed that this memorable judgment implies five distinct reasons for insisting upon a classical training. 1. The first reason is that on which less stress is laid, viz., that ignorance of Latin and Greek is a positive impediment in some other studies. The other four reasons are of larger scope. 2. 'The *ideality* of the scientific sense' is cultivated by studies which have not an immediate bearing on daily life. 3. An interest in knowledge *for its own sake* is promoted by the same means. 4. The power of thinking receives a varied *general* exercise in these studies. 5. They are of *historical* value, as illustrating the foundations on which so much of modern thought and life has been built.

"About six months after the memorial was signed, one of those who had subscribed it had occasion to deliver an address in the Aula of the University of Berlin (October 15, 1880). This was Dr. A. W. Hofmann, the eminent Professor of Chemistry. His words are those of a man whose labours and achievements belong to the province of the physical sciences, not to that of the 'humanities.' There can be no pretext for regarding him as a partizan or an advocate, pleading for Latin and Greek as subjects in which he is particularly interested. And here is his deliberate opinion:—

"'The total result of this great investigation cannot be a moment in doubt, and may be briefly summed up as follows:—That the Realschule of the first rank, whatever generous acknowledgment may be due to what it has actually accomplished, is nevertheless incapable of furnishing a preparation for academic studies equal to that offered by the gymnasium; that the

Realschule lacks a central point about which all other branches may group themselves, *while the gymnasium possesses such a point in the classical languages; that all efforts to find a substitute for the classical languages, whether in mathematics, in the modern languages, or in the natural sciences, have been hitherto unsuccessful;* that after long and vain search, we must always come back finally to the result of centuries of experience; that *the surest instrument that can be used in training the mind of youth is given us in the study of the languages, the literature, and the works of art of classical antiquity.'"*

Prof. Conrad, it may observed, adds his vote to that of the majorities quoted by Prof. Jebb, and it is a vote not without importance. It is the vote of an economist of note, and of one who takes (no doubt a thoroughly Prussian, but still) an unprejudiced view of the whole question.

Attempts have been made to minimize the value of these important conclusions. Dr. Steinbart, director of the Real-gymnasium at Duisburg, has compiled an elaborate set of statistics * to prove the successes of the Real-school men at the universities, and in after life. These have been utilized by Dr. Wislicenus, Professor of Chemistry at Würzburg, in an address which he lately delivered as Rector of that University, in support of the claims of the Real-schools. They have been similarly utilized in the "Classical Controversy" in this country.† It will be observed that Prof. Conrad disposes of the argument by the remark that it deals with a subject which lies beyond the domain of mere statistics. But in Germany, as previously stated, the question is not merely a theoretical one on which, as in England, every one may hold his own opinion, and please himself in the line of education he may choose. In Germany it implies admission to important professions, and with our thoroughly practical views on this subject it is scarcely possible to avoid the conclusion that the above weighty opinions are at least in some degree the result of custom, of professional feeling, and generally of that well-known disinclination to change an educational system that has on the whole wrought well. From this point of view, the majorities quoted are perhaps not more considerable than would be obtained if a similar vote were asked from the Scottish Presbyterian Assemblies as to the advisability of permitting an alternative to the present Arts course in the Scottish

* *Unsere Abiturienten, Duisburg*, 1878. *Fortsetzung*, 1881.

† *Journal of Education, September*, 1884.

universities as regards the preliminary training of the Presbyterian clergy. And yet competent clergymen are reared elsewhere on a wholly different system of preparatory training.

At the same time, if the question is regarded merely as one involving the value of a classical education, it is scarcely to be expected that a weightier testimony will ever be produced than that exhibited in the above extract. This testimony, too, curiously enough, is emphasized by the experience of France at the present moment. The Prussian schoolmaster, it was said, had gained the battle of Sadowa; and on the University of France, that is, on the whole French educational system, including its three grades of instruction, was laid a large share of the disasters of the Franco-German war. After the war a root and branch reform of French education was the cry of all parties, and, as was natural in a democratic society, the ancient classics formed the main object of attack. Three tendencies were observable: (1) the entire suppression of classical studies; (2) moderate reforms in the system of classical studies existing before the war;* (3) extensive changes in the ancient programmes and the introduction of new methods and of a totally new spirit into classical education. The law of 1880 instituted a new council which, by a majority, proceeded to work on the third of these plans. Latin was deposed from its former supremacy, its place being taken by French, while the amount of time devoted to science was largely increased. Taking all the classes of the secondary schools together, French now receives 51 hours per week, Latin 39, Greek 20, German or English 33, science 38, history and geography 36. The study of Latin does not begin till two years later than formerly: less time, too, is given to it after it is commenced. The shorter time devoted to Latin in the new code is supposed to be made up for by the superiority of the new method—the comparative and historical—on which the grammar is taught. The disciplinary value of Latin grammar on which the Berlin faculties lay so much stress is ignored, the great aim of Latin

* M. Jules Simon was the leading representative of this section of opinion. In his circular of 27th September, 1872, he declared that it would have been "un véritable crime que de renoncer à recevoir directment de tant de maîtres incomparables les plus hautes leçons de l'art, de la morale et de la logique."

teaching on the new method being merely facility in reading. "Les methodes nouvelles par la suppression ou l'amoindrissement des exercices les plus astreignans de latinité n'invitent qu'aux demi-efforts, à l'explications superficielles, à la lecture facile et courante qui donne l'illusion de savoir plutôt que la réalité." It is perhaps early enough as yet to estimate the results of a system that has had so short a trial, but it is an admitted fact that in the literary parts of the examinations for bachelor and licentiate, the level of attainment has already been distinctly lowered. Even the spelling of French words has degenerated since the suppression of Latin in two of the lower classes. Were the opinion of the French professorate asked* it would probably agree with that of the Prussian faculties. As it is, a professor at Poitiers, M. Hild, has spoken out boldly against the new methods, and he recommends his colleagues to have nothing to do with them. But as M. Duruy† remarks, in a passage that must go far to reconcile us to *laissez-faire*, with its many undoubted drawbacks in our higher education, "Est-ce assez clair et croit-on qu'un simple professeur de faculté qui dépend de son recteur, lequel appartient, corps et âme, à M. le directeur de l'enseignment supérieur, qui lui-même . . . oserait s'élever avec cette force contre les nouveaux programmes et les nouvelles méthodes, si ces programmes et ces méthodes étaient seulement défendables? Il est clair que non, et pour s'en convaincre, il suffirait de parcourir la collection de ces bulletins de faculté; on y trouverait aisément, sous des formes diverses, quelquefois avec plus de ménagemens dans les mots, toujours avec la même conviction, l'expressions répétées des mêmes plaintes et des mêmes regrets."

Nor is it only in the provincial faculties, like that of Poitiers, that objection is taken to the new arrangements. The teaching body at Paris is with few exceptions quite opposed to the new plan of studies. A code like a constitution will only be accepted in so far as it can work. In the teaching of history it is shown to be one thing to insert in a code concocted with closed doors the Vedas and the laws of Manu as a subject of instruction, but a

* The *conseil supérieur de l'instruction publique* does not ask the opinion of learned bodies like the Prussian minister, but sits with closed doors and simply issues its commands.

† *Revue des Deux Mondes*, February 15, 1884, p. 868.

different thing to get boys to take an interest in them; it is one thing to decide gravely that a knowledge of institutions is the principal aim and end of historical teaching in the French colleges; it is found to be a different thing to inspire the youth of France with a passion for the study of the chartularies of Charlemagne and the establishments of St. Louis. Some of the Lycées at Paris are quietly working out the new code. They accept as little of it as they can, and some of them have even taken upon them to reintroduce the exercises condemned by the council and to return gradually to the former usage. The inspectors have no heart in working the new system, and they interfere with the professors only when strictly required by their duty to do so. Meanwhile the bulletin of the Faculty of Letters at Paris is quite conclusive that the result of teaching the ancient languages in the diminished time and on the new methods is as little satisfactory at Paris as at Poitiers; and from the facts adduced it must be allowed to be very unsatisfactory indeed. As some compensation for this it is admitted that there is some improvement in the modern languages. French composition is only a little less bad than formerly. The slight improvement in French literature is due to the historical method of teaching; but, on the other hand, the spelling of the candidates has deteriorated so much that the faculty has serious thoughts of the appointment of a special official for the correction of the exercises in French. As is said in Prussia of the men from the Real-schools, "the candidates know perhaps a larger number of facts, but they have less fully developed minds." The faculty at Paris, in short, is at one with the professorate at Berlin as to the value which it attaches to classical studies; and as the result of the serious changes introduced into the plan of studies in France, it declares the general culture of the country to be in full decline (la culture générale est en pleine décadence).

END.

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GOLDEN THOUGHTS

FROM

The Spiritual Guide

OF

MIGUEL MOLINOS,

The Quietist, of Italy.

With Preface by J. HENRY SHORTHOUSE,

Author of "John Inglesant."

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